THE HUMANITY OF WORDS

A PRIMER OF SEMANTICS

by Bess Sondel

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TO

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Acknowledgments

My first acknowledgment must be to the students who, during the last two decades, have entered into a teaching-learning experience with me. I wish I could name them all, for they have been my friends and co-workers. Also in this connection I must acknowledge my indebtedness to my deans and associates at University College of The University of Chicago, where every effort was made to facilitate learning by doing. Perhaps nowhere else in the world would an inquiring instructor be given the opportunity to experiment and to observe year after year without any pressure—except that of support.

The writing of this book is a kind of personal summation, as of this date, and with the full realization that my personal limitations effect a boundary. I have ventured to analyze and to evaluate certain great works, and the boundary has pressed upon me. For this reason, I am even more deeply indebted to those who have helped me. When I approached the section on Korzybski, I did so with an awareness of how little I knew. I should not have wished to publish these pages without the careful editorial help of my friend M. Kendig, formerly Secretary and Educational Director of the Institute, and, since the death of Korzybski, Director of the Institute of General Semantics. The hours she spent on the manuscript are a gift to the many students

of Korzybski who will welcome these pages with the knowledge that they have been corrected by the advice and thoughtful suggestions of Kendig and her staff.

Charles Morris, my friend and my professor and guide over the years, took the time to read that portion of this book which concerns his two major works relative to the science of signs, to edit that portion of this book, and to read it in final draft. But, although my pages which are concerned with these important works have had the scrutiny of their author, they should be considered as the work of a student who has relied upon the pioneer work of the recognized leader in this field.

And now I must give credit to others, without whom this book could not have been written:

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Behavior; The Open Self; The Saturday Review: Norman Cousins, "Clean Bombs and Dirty Wars"; Tudor Publishing Company: Albert Einstein, "Autobiographical Notes," *Albert Einstein: Philosopher-Scientist;* The University of Chicago Press: Mortimer J. Adler, "The Philosopher," *The Works of the Mind;* Rudolf Carnap, *Meaning and Necessity;* Yale University Press: Gordon W. Allport, *Becoming.*

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BESS SONDEL

November 7, 1957.

PART ONE

The Communication Process Relates Man to Mankind

1. Semantics is a SOCIAL *science*

The word "semantics" was launched by the Frenchman Michel Bréal in an article published in 1883 and firmly established by his book *Essai de Sémantique (Science des significations)* which appeared in 1897. The word itself derives from the Greek *semantikos,* "significant," from *semainein,* "to signify," "to mean," etc.;[1] and the following definition of "semantics," which can be paraphrased in various ways, makes room for the essential points that this *Primer* will emphasize.

The subject matter of semantics is here limited to the study of techniques by which to accomplish purposes through the use of words.

Since semantics is related to human behavior, it is a social science in its own right, dependent upon and conforming with whatever exact knowledge has bearing on its own specific subject matter. Every social science worthy of the name has its roots in the more exact sciences. Systematic studies in human behavior—in race relations, in politics, in economics, etc.—draw heavily upon the biological sciences, notably psychology; and the biological sciences draw heavily upon the physical sciences. The study of

[1] See Allen Walker Read, "An Account of the Word 'Semantics,'" *Word,* IV, No. 2, August, 1948.

semantics rests solidly upon such scientific foundations. But it is also true that everything that can be said about semantics is a matter of opinion.

Because semantics is not an exact science, there are differences of opinion concerning semantic principles and practices. Specialists in the same area of social investigation frequently hold contrary opinions. Opinions derive, of course, from facts, but one opinion may be said to be more "informed" than another only by virtue of the inclusiveness and the relevance of the facts that support it.

2. *Why the* HUMANITY *of words?*

Words have the power to bind persons and peoples and generations together. While other living things steer themselves by signals that nature provides, man alone changes himself and his world by the signals and signs that he himself produces. And chief among these is words.

Only man can pyramid one idea upon another, and all of them interrelated.

Only man can look back on the past experience of his species and relate it constructively to the present and to the future. And this by means of words.

But there is another side to the humanity of words. We are born into an environment of words just as surely as we are born into an environment of weather.

The environment of words determines, from our earliest sentient moments, the nature of the environment of ideas and ideals in which we shall live. Through words, our ideas and our ideals become crystallized—almost solidified. They endure as "culture" and as "principles," and are, of course, slow-moving as compared with individual experience.

Just as men make and remake themselves by words, just as men make and remake their world by words, so words may make men in the image of what is already known and what is already sought after. The shackling power of words is great. We can save ourselves from their domination only as we can dominate them. But once the functions of words are understood, once the shackles are broken, words may become a power of equal, if not greater, strength for freedom.

Words have binding powers—and the measure of man's control over words is the measure of his freedom.

Semantics is the study of the mastery of words—in the interest of human goals.

The social science semantics is one means by which to approach the hoped-for end—a more mature, a more human use of language.

3. Language is SOCIAL

Language makes it possible for human beings to think together, to feel together, and to act together. For those who know a language, words may set up similar expectations, words may establish similar preferences, and words may be the cue to similar behavior. To know a language is to have a common ground upon which to meet others.

To say that language is social is to say that words make it possible for us to communicate with each other.

4. COMMUNICATION *and the concept of* UNIQUENESS

The word "communication" is a very broad term. When you hear it, you may think it refers to Western Union or

to the Morse code; to the Bell Telephone Company with its intricate network of wires; to the Pennsylvania Railroad and its system of tracks, its red lights, its green lights, its whistles; to the symphony; to the police siren; etc. Obviously, communication is a process that relates people and things.

In this *Primer*, we are interested in the communication process that relates human beings by means of words.

Verbal communication includes writing and reading, speaking and listening. *And thinking.* When we talk to our selves, this is probably the most important "communing" that we do.

We are interested, also, in nonverbal communication, in so far as it supplements the use of words. The tone of voice, the gestures, the facial expressions; a sigh, a smile, silence itself contributes something that is at once subtle and powerful. Every time we use words, we communicate far and beyond their literal significance.

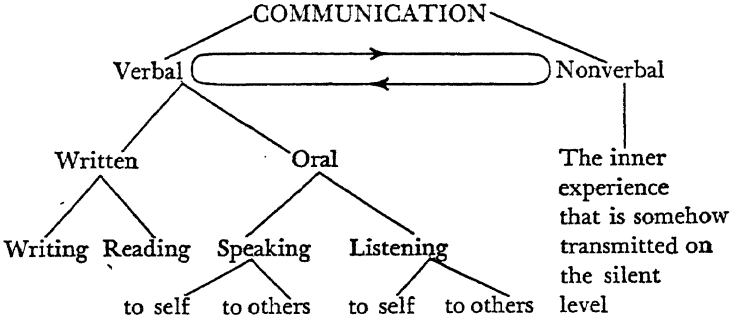
Both verbal and nonverbal signs express the uniqueness of the communicator. No two human beings in the world are exactly alike, and no two communication experiences are exactly alike. The characteristics which contribute to this uniqueness are often transmitted on the nonverbal level, for, it must be remembered, these unique characteristics *exist* on the nonverbal level. This uniqueness, the psychologist Gardner Murphy tells us in his *Personality, A Biosocial Approach to Origins and Structure* (1947), derives from the character and the organization of the physical structure of a person and from the pattern of his learned experience—from all the years of his biological and social past and his living present.

This uniqueness is so integral a part of the language system—and the nervous system—that it expresses itself on the nonverbal level every time we use words.

What Murphy is saying here is that the language system and the nervous system are as one, and that the character of the self is expressed through bodily as well as verbal behavior. Something comes through the eyes, the voice, the gestures, the manner that carries an increment of meaning over and beyond the words.

As we recognize an unseen speaker by his voice over the telephone or the radio—among all the voices we have ever heard—so do we become aware of this uniqueness which makes its imprint on the user of words. The little explored area of nonverbal communication is important for the added information it can give us concerning the communication process.

These, then, are the forms of communication that will interest the student of semantics:



All aspects of verbal communication—writing, reading, speaking, and listening—make use of the same basic tech-

niques by which to accomplish purposes. These basic techniques may be summed up under the one word "semantics."

Semantics is the subject that deals with techniques (devices) by which to communicate effectively. Communication is *effective* when it *effects* the desired purpose.

5. *The* SOURCES *of this Primer*

With the collaboration of many students and friends, I have tried, for over two decades, to refine semantic techniques by which to improve communication. The setting was a university classroom, and this was a learning experience for me, particularly in the earlier years of my teaching. It was generally agreed that a new approach to communication was sorely needed. With this in mind, we went slowly —recording speech, reading editorials, articles, advertisements, etc.—analyzing and evaluating. We were trying to discover what happened when effective communication seemed to be taking place. We were trying, in other words, to penetrate to techniques by which to accomplish purposes through the use of words. *We were searching for semantic theory.*

As the years of practical work passed, we began to formulate some theories about the uses and the misuses of words. Over the years, these semantic theories have been refined. In Part Five of this book they will be presented under the broader heading of "A Field Theory of Communication."

In these earlier years, our attention was concentrated on *actual* communication experiences. But, in the meantime, many important theoretical works on semantics were being

published. We read these carefully; first, to understand, and then to determine whether or not they corroborated semantic theory that seemed to be emerging from actual practice.

In Parts Two, Three, and Four of this *Primer,* we shall explore three important theoretical sources in the field of semantics which confirmed and broadened the practical approach.

In Ogden's and Richards' *The Meaning of Meaning* (1923), we found the first confirmatory hints toward a semantic theory that was congenial to our perspective. In Alfred Korzybski's *Science and Sanity* (1933), again, we found corroboration and expansion of theories that had grown out of practice. But it was in Charles Morris's *Signs, Language and Behavior* (1946) that we found a science of signs that provided the semantic apparatus for a field theory of communication and the semantic devices appropriate to it ^{1958}. (The superscript is, of course, a semantic device to refer to the time dimension.)

6. *The* GOALS *of semantics*

The subject matter of semantics is concerned with techniques (devices) by which to communicate effectively. And we communicate *effect*ively when we *effect* the desired *purpose.*

The utility of semantics is no longer questioned. It is recognized as a practical means of attaining goals. The business executive who sits at a desk equipped with an intercom system and several telephones has already taken the first decisive steps in the use of the new discipline. Business is a transaction—a trans-action—an action that *crosses over.* Business is a you-give-me-something and I'll-give-you-something relationship. This is a transaction that

calls for the use of words thought, said, and written. There is need for decisions and plans. There is need for conversation, for conferences, for discussions. There is need for reports, for letters. The businessman must talk with his associates, with his superiors, with his workers, with his competitors, with his customers, with his "prospects." The businessman must communicate with union officials and, frequently, with government officials. He must inform others; he must persuade others; he must get others to do things for him and with him. He advertises. He uses salespeople. And he must be equipped to handle the welter of words that come his way. He has discovered, quite suddenly, that in our competitive economy his most valuable stock in trade is words. He has discovered that certain semantic devices are appropriate to certain communication experiences and he has set about developing a high efficiency in the use of those skills. Dollar-profit is the lure—and the reward.

But there is "profit" and "profit." Beyond the necessary dollar-profit that concerns us all, there is value-profit—there is human-profit. The teacher, the preacher, the lawyer, the clubwoman; the wife, the mother, the friend, the man in the street—everyone—is reaching out toward "profit" of one kind or another. All of us spend our whole lives through seeking satisfactions of our own needs.

Throughout the day, every day of our lives, we use words in an effort to achieve our purposes—whatever they are. The purpose is there, whether we are aware of it or not. We are needing, wanting, striving human beings. To put this into one word, we are *pur'posive* creatures. Life means activity. But activity, the biologists tell us, always springs from purpose. Purpose is built-in. We are born that way.

The purpose may be on the deep unconscious level of

bodily needs. The purpose may be on the bread-and-butter level of practical wants. The purpose may be on the level of social drives for approval, for companionship, for friendship, for love. The purpose may be on the level of cultural and moral ideals. The purpose may be—and, indeed, usually is—a combination of any or all of these. But it is when we strive to fulfill an *anticipated* goal—on the *conscious* level—that our behavior is at its most intelligent.

In the conscious striving toward foreseen goals, semantic devices will help us in three ways:

(1) To avoid the misuses of language

(2) To entertain[2] obstacles with understanding and efficiency

(3) To make the best use of words toward the accomplishment of goals

7. *But* WORDS *and* SEMANTIC DEVICES *are not enough*

The word "communication" implies that at least two persons are involved. At its simplest, there is a writer and a reader; there is a speaker and a listener. The words that are used are only *signs* of thoughts and feelings and actions. It is not enough to understand signs. I understand the sign "attitude," for instance. I can define it. *An attitude,* I might say, *is a readiness to act in one way rather than another.* This is easy. I sound as if I "know" something. But this is only a definition—and outside the context of a life situation. It is essential, also, for me to understand (in so far as I can) the flesh-and-blood readiness of a human being in a

[2] The word "entertain" is important here because an obstacle provides information that becomes operative in a future activity. In other words, in order to overcome an obstacle, it is necessary to use that obstacle itself! What we do with the information that the obstacle provides depends, of course, upon the whole context. (This will be explained in detail in the discussion of feedback in Part Five below.)

given set of circumstances to act in one way rather than another.

Human behavior is, of course, complex beyond the power of words to describe—and words are only signs of the living life. All of us use words, at times, hardly knowing what we mean. In such cases, we use words to formulate and clarify our thoughts. And there are times when, with the best intentions in the world, we say one thing and mean another. When one woman says to another *You always did look nice in that suit* the listener may think she means *Are you still wearing that old rag?* But maybe she does mean that the suit is becoming—regardless of its "age." We speak, and others listen. Others speak, and we listen. It would be good when we are trying to communicate if we could know just what is going on inside someone else's skin. But we cannot. We can only do the best we can. We try to "see into" a writer or a speaker as deeply as we can. If we can, somehow, "reach" that person, his words take on meanings from his personality-as-a-whole.

Semantic devices are not concerned with words alone. Semantic devices are concerned with the *arrangement* of words. An idea is an *arrangement* of words. The personality of an individual is an *arrangement* of his unique self as derived from his biological and social past. An idea is expressive—always—of a personality-as-a-whole. Semantic devices will help us to understand an idea (an *arrangement* of words) as emerging from a personality (an *arrangement* of a unique self).

The more we know about our possible collaborators—or opponents!—the more efficiently we can use semantic devices.

The most direct route to a more skillful use of semantic techniques is the study of personality. The word "personality" has always been associated, even in popular usage, with

the way one person interacts with others. And this is pertinent to our present goals.

There is an approach to the study of personality that has become commonplace in the biological sciences but has not yet[1958] reached its full measure of usefulness in everyday experience. Gardner Murphy explicates this theory in his *Personality, A Biosocial Approach.* It is precisely the conception of personality that gives semantic theory its broadest application.

It is significant that Murphy speaks of the individual as a "personality in a field."

The personality in a field is described as one in which the self and the world flow into one another. There is no fixed boundary between them; if there is a separation at all, it is often "vague or non-existent." (page 5)

Murphy cast about for a word to describe this conception of the personality and settled on the word "field" which, he says, is an acceptable term only if we remember that he uses it in the way it is used in physics:

In physics, an electromagnetic field "permits of no strict demarcation of a boundary and may change continually as a result of varying currents." (page 5)

I can think of no other language that would more adequately describe a communication process between living, changing, interacting human beings. You must remember that physicists were forced, before other scientists, to recognize the inseparability of electricity and magnetism. So fundamental is the connection between the two that physicists made one word—electromagnetism—to describe this process phenomenon. I point only to the fact that semantic devices are without value unless we understand

that they are designed to effect the accomplishment of purpose within a process situation. There is no strict demarcation of a boundary between the participants in a communication process. All participants are part of the field. And the process may—indeed does—change continuously as a result of varying currents.

Our semantic devices will be appropriate to a communication process, no part of which can be evaluated apart from the situation-as-a-whole.

Our semantic devices will be appropriate, in other words, to a field theory of communication.

8. RELATEDNESS *and* "THE ELECTROMAGNETIC FIELD" *of physics*

The term "relativity," as introduced by Einstein and others, has made even the laymen aware of the fundamental nature of relations in the physical world. With field physics, relatedness became the basic law of all of nature.

F. S. C. Northrop differentiates between particle physics and field physics in his *Logic of the Sciences and the Humanities.* The important point, he says, is the shift in emphasis "from particle to field physics" which "completely reverses the status of relatedness and particles." (page 228) In particle physics, particles are considered to be the *primary* reality in all of nature; relatedness between particles, secondary. In field physics, relatedness is considered to be the *primary* reality; particles, secondary. In other words, it is the relationship between particles, rather than the particles themselves, which is the primary reality.

Without relatedness, there is no communication.

The semantic devices which this book recommends will be

such as to foster constructive relatedness between human beings—and this by means of words.

9. *Constructive* RELATEDNESS *calls for supportive* EVIDENCE

We use words to inform others, to persuade others, to activate others. When we try to draw others to us in the interest of a purpose, we must affect their *attitudes.* Attitudes are at the deepest core of the human being. They are hard to reach and extremely difficult to change. How can we persuade another to adopt our cause?

Again Northrop is suggestive in his *Logic of the Sciences and the Humanities.* Northrop points out that science deals with *what is.* But man is concerned, as well, with what *ought to be.* Man *wants.* Man *desires.* Man *prefers* some things to others. Man *values* some things above others. Whatever has worth for a man is a value to that man. We use words to try to get what we want. But how can we persuade another that what *we* want is desirable also *for him?*

According to Northrop, the solid ground that supports our wants, our values, our beliefs, our preferences is knowledge—scientific knowledge. Our values are "verifiable . . . as true or false." (page 338) When our values conform with what is known, our values are true, Northrop says.

It is the opinion of Northrop that the value system of every human being should be informed, and forever reinformed, by advancing knowledge. If it is not, he warns, the physical facts of science will outpace human behavior —and man-made machines may be the monster that will destroy him.

This book will prescribe semantic devices by which to persuade others to action in the interest of our purposes—in the

interest of our wants, our needs, our values. Such persuasion calls for supportive evidence. And this supportive evidence is to be found in what is known.

What is known[1958]?

1. We know that we live in a process world in which change is ever-present.

2. We know that we live in a world in which nothing repeats itself exactly and that everything is unique—and in a state of constant transformation.

3. We know that nothing is isolated—that everything is related.

In his *Human Use of Human Beings,* Norbert Wiener makes a statement that I shall quote exactly because it is the backbone of field theory of communication and the semantic devices that are appropriate to it:

> One of the most interesting aspects of the world is that it can be considered to be made up of *patterns.* A pattern is essentially an arrangement. It is characterized by the order of the elements of which it is made, rather than by the intrinsic nature of the elements. (page 3)

What Wiener is saying here is that it is the relationship between things, and not the things themselves, which is of primary significance. Field theory again! Nature is made up of patterns, and of patterns within patterns—until, ultimately, all things are related.

4. We know that wherever there is relatedness there is order of one kind or another; sometimes favorable, sometimes not favorable.

This is what we *know.* But what do we *believe?*

Every decision you and I make, small or great, sinks deeply into a system of beliefs—into a value system. The

question that Northrop raises is this *Does the value system have confirmation in what is known?* Everyone of us, sooner or later, comes up against the hard cold fact that the advance of knowledge has been an international enterprise; that with the advance of science, we have experienced a concomitant advance in philosophy, in the arts, in industry, etc. But where, Northrop asks, is the advance toward membership in the human community?

We have not yet opened our minds and our hearts and our selves to the one enveloping fact that the community is now the world and that the class to which we belong is humanity.

Can an ethics be built around the basic assumptions of science[1958]? Is there an ethics that will accept process with inevitable change? Is there an ethics that will accept the uniqueness of every human being who lives? Is there an ethics that will accept universal relatedness? Is there an ethics that will accept the assumption of order, as exhibited in patterns—natural and man-made—an order that would include the race, man; habitat, the world? Northrop says *Yes* and that such an ethics is true.

Persuasion can, and should, rest upon supportive evidence. Our semantic devices will make it possible for us to persuade others to desired responses through the communication of ideas and ideals which have their roots in the assumptions of science.

10. Will we OPEN *our* SELVES?

If we start with the premise that there is no strict line of demarcation between the self and the world, we must conclude that man is, by nature, conjoined with man; that groups of men are, by nature, conjoined with other groups of men. And we must conclude, finally, that it remains only

for man to awaken to the potentialities of his physical—and human—self to recognize the relatedness of all men—the unity of mankind.

Semantic devices thrive best on the open self.

Charles Morris's *The Open Self* calls upon man to remake himself in new design.

What is the open self?

The open self is outgoing, but receptive to change.

The closed self is the anxious self, and opposed to change.

The open self is flexible—open-end—but growing, expanding.

The closed self is inflexible—closed-end—intolerant and anxious when caught in the grip of change.

The open self is receptive and adaptable to the fact of uniqueness. The universal acceptance of this fact is the basis for unity in a world of diversity.

The closed self is hostile to uniqueness. Anything different is suspect.

Just so, societies are open or closed; receptive or opposed to change; flexible or inflexible; respectful of uniqueness or hostile to uniqueness. For societies are made up of persons. The circular relationship between persons and institutions—political, religious, social, educational, etc.—may be ever-expanding or viciously closed, Morris says. And, because man-made institutions endure beyond the men who have made them, the individual has a responsibility that goes far and beyond concern for the self.

Morris compares the community of scientists to the Open Society of Open Selves. The scientist makes use of all

known observations and experiments in a given era. Thus science has an international base that admits of no artificial boundaries. But the enterprise of the Open Society of Open Selves has an even broader perspective than that of the community of scientists. The goal of the Open Society of Open Selves should engage the whole man—his system of beliefs as well as the impersonal body of knowledge. That ideal is approachable only if we accept the basic assumptions of process and uniqueness and relatedness and order.

Words are used most efficiently by an outgoing flexible self —open-end—that is receptive to change.

Words are used most efficiently by an open self that adapts continuously, and favorably, to the process world in the interest of a predetermined goal.

11. Semantic devices enable us to move from IDEAS *to* IDEALS

Another aspect of the self that must be considered before we begin our study of semantics is the advance from one idea to another—and the circular relationship between ideas and ideals.

Morris defines an idea as something than can be *sign*ified. To say this differently, an idea is something that can be put into signs—into words. The history of civilization is, of course, the history of the march of ideas. How do new ideas come into being?

Morris says all of us can and do advance new ideas. Try new combinations of what is already available, he prescribes. "Become chemists," he says, "in experimenting with sign compounds." (page 70)

Here is advice that calls, again, for a social aspect of language. Ideas are dependent upon language, for when we think, we use words. Words are put together according to established rules in order to make a language. These rules may be summed up in the word "grammar." One of the greatest functions of grammar lies in the fact that it permits the formulation of new ideas by the manipulation of words within the established rules of a language.

We are compelled to manipulate words (and hence, ideas) whenever we are faced with a problem. Before a pressing problem, we exercise a kind of inventiveness that enables us to meet that problem by somehow infusing the "old" with the "new." We do this by using our past experience in "new" ways—in relation to the present need. We do this, frequently, by giving "new" values to our available resources in connection with something in the environment. Perhaps we do this by introducing new relations, different relations between known factors. Columbus knew that the Indies were to the *east* of Spain, and Columbus believed that the world was round. He sailed *west* in the hope that he would reach the Spice Islands . . . Perhaps we bring to light different aspects of things we have been accustomed to "seeing" in habitual ways. Most of us look with unseeing eyes on the resources at our command—until we are faced with a problem. Those who are imaginative can then discover, in their available resources, the means by which to adapt favorably to a present difficulty. Before Braille, reading had been associated always with sight. But the blind have no sight. Louis Braille set up a new relationship between touch and the reading of words . . . It is this kind of re-vision, this kind of ingenuity, this kind of luminosity that is evidenced in new and happy

combinations of things already known that give rise to "new" ideas.

Morris says that as our ideas advance, our ideals change. An ideal differs from an idea in that it is not merely signified (thought or expressed in words), but is valued, is wanted, is sought after. Thus an ideal looks to the future and makes demands upon the self toward fulfillment.

When the moon is reached by man, this ideal will have become a reality. *What next?* Something will be superimposed upon what is learned by the attainment of that ideal. Men will *think*. And, again, this will call for the use of words. If, then, a new ideal is born, words will be used to inform others and persuade others and activate others to the new cause.

An idea is something signified. Ideas are dependent upon language. New ideas are hard to come by, but they result from a kind of clairvoyance that "sees" new relationships between things already known.

As knowledge advances, as works are achieved, ideals must advance. And these, in turn, will call for new ideas. The process is circular—and without limit.

Words thought, said, and written pave the way.

12. The ORGANIZATION *of this Primer*

This book is, of course, a collection of words. But any collection of words that is designed to accomplish a purpose should make a verbal pattern—and one that is discernible by a recipient. This book may be described as a means to end *verbal* pattern that anticipates an *actual* pattern. But an end is something valued—something sought after—

and is, in this sense, an ideal that looks to the future. And, since no one can predict *exactly* the consequences of human activities, this book is expressive of opinion.

Part One is introductory. Its purpose is to inform you that the *Primer* will set up means—semantic devices—by which to approach a desired end—the human use of man's greatest resource, words.

Part Two will present Ogden's and Richards' "triangle" of meaning, as derived from their important *The Meaning of Meaning*. This early work will be shown to suggest a way of making *verbal* patterns that find their counterpart in *actual* patterns in the world. In this important area, these authors have contributed to field theory of communication and the semantic devices appropriate to it.

Part Three will present essential points of *Science and Sanity* that have relevance to field theory of communication. Here you will find many usable semantic devices. And here, again, emphasis will be placed on Korzybski's insistence that the verbal map accurately represent the actual territory. This, you will find, has significance for the making of verbal patterns that accurately designate something in the real world of people and things.

Part Four will present the contributions of Morris's science of signs that relate to the uses and misuses of language. The exposition of Morris gives us the semantic apparatus by which to refine a field theory of communication.

Part Five will present a field theory of communication and the semantic devices appropriate to it. Here the emphasis will be on practical applications of semantic theory.

At this writing[1958], we have reached a kind of plateau at University College of the University of Chicago. Field theory of communication must attempt to keep pace, in

so far as it can, with advancing knowledge. One area toward which we look hopefully is Mathematical Information Theory as pursued by communication engineers, notably Claude Shannon and Warren Weaver. When Information Theory is extended to the context of ideas and ideals, perhaps we shall then be able to quantify the theories which are presented qualitatively in this work.

Semantics is a social science that falls under the broader subject of communication. Communication is one aspect of human behavior and human behavior is concerned with everything from the humanities to the physical sciences! But semantics is a social science, and, as such, is largely a body of opinion. Since this is so, theories and practices of semantics are open-end and subject always to revision in the light of increasing knowledge. We stop here—at that plateau which is designated in Part Five as "A Field Theory of Communication"[1958].

PART TWO

An Analysis of
The Meaning of Meaning

by

C. K. Ogden and I. A. Richards

". . . a new Science . . . of Symbolism . . ."

13. ". . . a new Science . . . of Symbolism . . ."[3]

The Meaning of Meaning of Ogden and Richards marks an historical turning point in the history of semantics. Much work had been done on the merely verbal level; much work had been done on the merely psychological aspects of the uses of language; but the innovation of these authors lies in the fact that they relate words and thoughts to things.

It is very important to keep in mind the restricted use of the key word "symbol" in the exposition of Ogden and Richards. Others, notably Charles Morris, use the term in a much broader way.

For Ogden and Richards, the term "symbol" is used only for such words as refer to things, situations, events, etc.

The new science of symbolism is, therefore, restricted to that area of semantics which is concerned with words that refer through thoughts to things, etc.

Any word that refers to a feeling or an attitude is not a symbol. In the sentence *This is good* "this" is a symbol only if it refers to a thing—situation, event, etc., *in the outside world*—an apple, a boy, a symphony, a tree, a chair, etc. "Is good" has "no symbolic function," these authors say, since it serves only to express an attitude,

[3] *The Meaning of Meaning*, p. 242.

Such terms as "beauty," "freedom," "liberty," "loyalty," "principles," "faith," "value," "the State," "industrious," "important," "approved," etc., are not symbols because they are (to use the words of Ogden and Richards) "complicated by emotional, diplomatic, and other disturbances." Such terms come under the classification of "emotive language." As such, they are not relevant to the new science of symbolism.

This distinction between symbolic and emotive language is not intended by these authors to depreciate emotive language. Emotive language is conceded by Ogden and Richards to have its usefulness in the communication process. It may be used, they say, to evoke desired attitudes in others or to incite others to action of one kind or another. But emotive language has no place in the new science of symbolism.

Ogden and Richards are interested only in the correspondence of words and thoughts and things, and the language of science is set up as the exemplar of their theories. In the language of science, the words refer specifically and definitely and accurately to *things,* and this without the intrusion of the reporter's attitudes. A reporter doesn't say *It's hot today.* He says *The temperature is ninety degrees according to that thermometer.* The language of science is symbolic language at its best.

As we proceed, it will become apparent that even though the science of symbolism of Ogden and Richards excludes that area of semantics which concerns the attitudes, etc. of the individual, it has, nevertheless, practical applications to everyday communication.

The new science of symbolism prepares the ground for broader theories of semantics which are concerned with the whole man—feeling-thinking-doing—within the world of people and things. The new science of symbolism explicates the language of fact[4] and establishes principles of order—a solid foundation upon which to build.

14. What do you MEAN?

The title of Ogden's and Richards' book is *The Meaning of Meaning.* The first thing these authors take pains to do is to indicate the complexity of the word "meaning."

The question *What do you mean?* is not so simple as it sounds. There are three ways to answer this question:

If Mabel looks at the moon and then at Joe and asks *What is the moon?* Joe may answer *The moon is a celestial body that is a satellite of the earth.* If Mabel is not yet informed, she would probably ask *What do you mean, Joe?*

Well, Joe answers, *a celestial body is a heavenly body—a body in the sky.*

But a satellite, Joe, what is that?

A satellite is a body that goes round and round a larger parent body—the way the moon goes around the earth.

What Joe is doing here is defining words.[5] This is one way to answer the question *What do you mean?*

[4] In *The Meaning of Meaning,* fn. p. 68; Appendix E, p. 294, Ogden and Richards point out that to say a reference is "true" is to say that the reference refers to a "fact."

[5] To improve on Joe's impromptu definitions, see *Webster's New World Dictionary of the American Language,* College Edition. Cleveland and New York: The World Publishing Company, 1957. (Hereinafter referred to as *World.*)

There are, of course, several ways to define a word. Joe used two of the most common. He used *known* words to define the *unknown* words. If he was successful in this, the unknown words became meaningful to Mabel. They were no longer mere noises. But Joe used another way to define "satellite." He described a satellite as being "attached to" a "parent" body. He was suggesting that the relation of the moon to the earth was in one important way *like* the relation of a child to its parent. This is definition by analogy.

Sometimes all that is required is the definition of words to satisfy a questioner.

Having satisfied himself that the definitions of words are clear, Joe may make another answer. He may say *I wish we could see the moon from here, but let me think . . . As I recall from my high-school days, the moon is about 240,000 miles from the earth. When we have a full moon, the moon is in apposition with the sun. What looks like "the man in the moon" is the irregularity of the surface caused by mountains,* etc.

Now Joe is symbolizing his thoughts—putting his thoughts into words. In answer to the question *What do you mean?* Joes is now trying to remember, he is now trying to clarify his thoughts about the moon.

But there is still a third emphasis, a third way to answer the question. Joe may be a hardheaded reporter. Now, while he will be careful that his words are meaningful and his thoughts clear, he will make every effort to refer his (symbolized) thoughts to things. He will say *Let's go outside. Let's look through my telescope . . . That object out there is roughly 240,000 miles from the earth. It shines by reflected light, from the sun. Judging by the shape of the*

moon, we can tell its position in relation to the sun. See, it's full moon now—it's directly opposite the sun. See those mountains and craters and valleys . . . etc.

Joe is now referring his symbolized thoughts to the object, moon.

You can see, of course, that when I ask you *What do you mean?* you can't really know:

(1) If I am confused about the definitions of your words;

(2) If I am wondering what's going on inside your head; or,

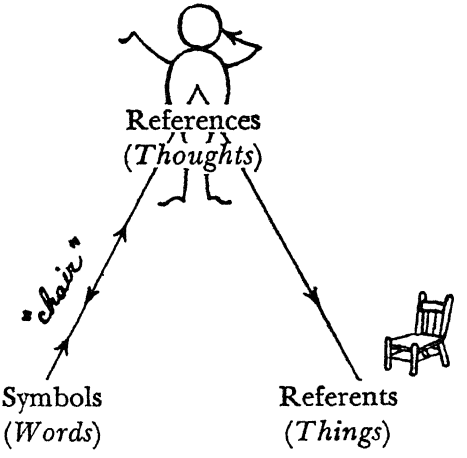
(3) If I want to know what your words refer to out there in the world.

The best thing you can do, under these circumstances, is to ask this question *What don't you understand?* This should help clear up the area in which the confusion exists. If you are using technical language in a field in which I have no competence, I might reply *Your words confuse me. Will you define them, please?* Or, if your statements seem to me to be disconnected, or unrelated, or inconsistent, I might say *I don't follow your thoughts. Start over again.* Or, if you are talking about something altogether outside my experience, I might say *I never heard of that thing. What is it? Where is it? Show me.*

When we are confused, we rarely penetrate to the area of our confusion. And this does not help matters. Ogden and Richards made a great advance in the field of semantics when they unscrambled the three aspects of meaning—words, thoughts, and things—in their "triangle" of meaning.

15. The "triangle" of MEANING *of Ogden and Richards*

The "triangle" of meaning[6] shows the relations between words, thoughts, and things.



At the peak of the "triangle" is a human being. Here is either the user of words—the person who has selected the words—or the recipient of the words who must, from his perspective, entertain[7] those words.

[6] I have taken the liberty of putting a person at the peak of Ogden's and Richards' bare "triangle." See *The Meaning of Meaning*, p. 11. Also, at this point, touch a chair or point to a chair silently. You can't sit on a sketch (which is, itself, a nonverbal symbol).

[7] Again, notice the important word "entertain." We do more than receive words. Look into your *World* and read, first, the definition of "enter": "to force a way into"; "to penetrate"; "to pierce." Now notice the definition of "entertain." Suggestive for our use in this context are: "to consider"; "to keep in mind"; "to keep up"; "to continue." A recipient must find his way *into* the words of another and evaluate them and *use them as new information* in his responsive activity. (This will be developed in detail in Part Five below.)

There is no base in this "triangle."
There is no direct relation between words and things.

Consider yourself at the peak of that "triangle." As you use the word "chair," if your thoughts and mine are directed to the same object out there in the world, then you and I come together—we communicate through the use of the word "chair." We "understand" each other.

All three aspects of meaning—words, thoughts, and things—are the essential components of every communication process.
Not one of these three aspects may be ignored in the science of symbolism.

16. "Verbomania"

Ogden and Richards are derisive of people who give their attention to words apart from thoughts and things. They invented the word "verbomania" to describe such "verbalizers."

Everyone is quick to recognize the usefulness of spoken words in the achievement of purpose. This is so obvious that there is hardly a person who would not, if he could, improve his use of spoken words. And this is good. But attention to words for their own sake has created verbalizers of various sorts.

There is the verbalizer who wants to "speak well" about everything and anything. No one can speak well about everything and anything. There are innumerable topics on which everyone must remain silent—and receptive. Indeed, this is a sign of intelligence.

I am remembering now an incident that occurred in my

own home. We were entertaining a professional group—part medical and part academic. A renowned medical man, but one who refuses, strangely enough, to admit ignorance on any topic, began to speak with "authority" about the Far East. Now this was an area in which another of our guests had firsthand experience as well as a long academic career. He made a short but what should have been an assassinating comment. But the medical man was stubborn. He continued to prod our friend from India for an expansion of his comment. And this was the reply that might well be directed at every verbalizer who is a pretender to knowledge.

"If I had a lifetime, sir, in which to try to educate you about the Far East, I should do my best. But, tonight, sir, I am weary of talk that is totally unrelated to things as they are."

There is the verbalizer who abhors the silence that is necessary to listening. These are, for one reason or another, compulsive talkers. They keep going without making the slightest effort to entertain anything that occurs in the environment. They have mouths but not ears.

Only last week, a successful attorney cornered me and asked:

"Say, what's this new term "speedback" I've been hearing about in communication?"

"Oh," I said, "you mean 'feedback.' "

"Yes, that's it! What is it?"

I defined the word for him carefully (and will for you in Part Five). His rejoinder made it perfectly clear that he hadn't listened to a word I had said. He kept right on referring to "speedback," and the noises he made were sheer nonsense.

Some apes had more sense than some human animals now exhibit on occasion. The ape man listened before he began to stomp and yell as a signal for defensive action by his group. Listening was part of his equipment for survival. We stomp and yell, but don't always know why. Somewhere along the line, we have forgotten how to listen —and listening is part of our defensive and offensive and collaborative equipment.

Like our historical ancestor, we should "listen" with all of our resources. We should look, and see, and hear, and feel, and perceive in every possible human way. In the accomplishment of a purpose by means of words, it is necessary to note and to profit by the information we receive by looking and by listening. *Our words have consequences,* and, in the accomplishment of purpose, we must be concerned with those consequences. Do our listeners understand? Are they interested? Only by paying attention to the results of our own words can we use corrective measures by which to move forward efficiently toward a goal.

The "triangle" of meaning reminds us that words alone—mouths alone—are not enough.

The use of words must involve a willingness to *receive,* for, without reception of responsive signs from others, we have no way of knowing where we are—in respect to a goal.

When we speak without listening—without perceiving—our words are returned to us as an echo. For others will tune us out.

*17. The "*THINKER*" who is insulated from the world*

Ogden and Richards are equally disdainful of those who keep meanings locked inside their heads. Asylums are full

of such people. The head is crammed with thoughts—to bursting—but with little, if any, relation to the real world of people and things.

This inattention to the outside world needs to be emphasized because so many intelligent people withdraw from the world. They find it crass, harsh, unpleasant . . . I am remembering now a brilliant young woman who took top honors in a graduate school of social science. After taking her degree, she was assigned to an excellent position in the field, but she was utterly incapable of relating her theoretical knowledge—the words and the thoughts—to the things that confronted her: the squalor, the poverty, the starvation, the sickness, the drunkenness, etc. The last time I saw her, she was in a cubicle in the underground stacks of a university library translating articles in foreign periodicals. And she was happy. Here was a girl who had no conception of the humanity of words.

The "triangle" of meaning alerts us to the fact that the circuit is not completed until words are referred—through thoughts—to things.

18. The PRIVATE *life of words*

We are interested now in the thoughtful fellow I have put at the peak of the "triangle." Notice that he comes *between* the words and the things they refer to out there in the world. This is precisely where you stood when you read the word "satellite" in these pages. Something happened in your nervous system *before* you could refer that word to the moon, or perhaps a man-made object, up there.

To repeat:

Always: There is no direct relation between the word and the thing! A human being who has lived his own per-

sonal life is at the center of the process. Each one of us has lived a lifetime with his words. For us, words are meaningful only as they relate to our own lives. There is no other way.

Therefore:

The meaning of words—as we read and write and speak and listen—is filtered through and through by the personal experience of the user. For this reason, the meaning of a word is (at least slightly) different for each user.

If a speaker uses the word "labor" when he addresses a group of businessmen and workers without specifying precisely what he is referring to, there may be as many "thinkings-of" labor as there are listeners. Each one will be preoccupied with his own experience, his own thoughts, his own problems. One listener may refer the word to his own job; another, to union squabbles; another, to a strike in a steel mill; another, to a union local; another, to a particular job at a particular time and a particular place, etc. The *word* is the same but the "thinkings-of" are different!

We forget that words mean different things to different people and we hardly clarify meanings, even for ourselves.

A human being with his unique past, present, and future is at the center of the communication process.

The meaning of a word is at least slightly different for each user.

The obligation of the user of words is to know just what his words refer to out there in the world.

The obligation of each participant is to attempt to discover what the key words of a user refer to.

Communication takes place only when the words of a user refer the thoughts of all participants to the same objects.

19. The PUBLIC *life of words*

Even though understanding between people is never complete, the public life of words is extensive. If this were not so, our efforts to communicate would be greatly obstructed.

At this point,[8] we are interested in the public life of words in connection with Ogden's and Richards' "triangle" of meaning.

The meaning of a single isolated symbol is almost impossible to get at, Ogden and Richards point out. This is especially so when the word refers to a complex thing, situation, event, etc. Words such as "labor," "education," "democracy," "industry," "politics," etc., are like shorthand symbols for vast moving complexes of people and things. But in the economy necessary to the communication process, we must use these words.

What can we do to minimize the private life of such words and maximize their utility for purposes of communication? The answer is simple but effective:

Say "labor" *when!*
Say "labor" *where!*
Say "labor" in connection with *whom!*
Say "labor" in connection with *what!*

I know what you're thinking. "Labor" and "education" and "democracy" and "industry" and "society" and "politics," etc., are big (abstract) words that cover a lot of ground. And you are right, of course. But let's take a simple word like "chair." Unless we use more words, it is impossible to know what in the world the word refers to.

As you read the word "chair," what goes on inside *your* head?

[8] See Part Three below, for Korzybski's discussion of words as abstractions.

If you are sitting comfortably in your own chair, you will probably think about it and look at it and feel its comfort. That's easy. But, if you are a barber, you may think about the new chair you need for your shop. And, if you are an instructor, your thoughts may turn to the professorial chair you covet. Some poor soul may think apprehensively about the dentist's chair, or even the electric chair . . .

Words make the trip through the nervous system of a human being before they can be referred outward to the real thing—chair, or whatever it is. Don't assume that everyone responds to your words in precisely the same way you do. Make the context in which you use the words clear, and do this through the use of words that refer to specific things.

The simple but important semantic device is to say: Where. When. Who. What.

Too many of us are hesitant about asking *What do you mean?* We are reluctant to say *I don't understand.*

A supervisor of nurses in one of our large hospitals told me that Orientals are likely to answer the question *Do you understand?* in the affirmative, whether they do or do not. Perhaps they feel that they lose face by admitting that they do not understand. This supervisor told me that the question is useless and the nurses say instead *Let me see you do it.*

One of my favorite expressions is *I don't understand just what you are referring to. Will you say that again, please, in another way?* This helps me, and it helps the other person, too, to clarify his thinking in relation to things. The question *What are you talking about?* is semantically sharp, but probably too brash. But we must

face the fact that, frequently, people do not know—*exactly*. How, then, can we?

The simple but important semantic device is to ask: Where? When? Who? What?

20. How to USE *the "triangle"*

Look, again, at the "triangle."

The key words of Ogden and Richards are 1. SYMBOL, 2. REFERENCE, and 3. REFERENT. Attention to these three terms will give you the essential points of the semantic theory of these authors:

1. SYMBOL

For Ogden and Richards, some words are symbols; others are not. As has already been indicated, these authors restrict the use of the term "symbol" to words that refer, through thoughts, to things. Everything inside the skin that relates to feelings, attitudes, hopes, dreams, etc. is excluded. This is the distinguishing characteristic of their science of symbolism.

Let me give you a sample of "symbolic" language, as defined by Ogden and Richards:

> Our house is on a lot 60 x 150. There are five rooms, all on one floor. The living room is 17 x 21. This faces the street on the 21-foot side. Facing the rear is a dinette, the kitchen, and the utility room. There are two bedrooms (with connecting bath), one facing the street, the other the rear.

This is not very exciting, is it? No. The words are intended to refer to things. They are symbols.

You can see, of course, that the new science of symbolism

of Ogden and Richards deals only with a restricted area of human experience. The thing is "observed" with cold eyes—with eyes that do not find things good or bad, beautiful or ugly, useful or not useful, important or not important, etc. The symbol refers impersonally to the thing.

I grant that it is impossible to eliminate the personal bias of an observer. I grant that we look at things from where we stand—and for what we want. I grant that we select our "facts" to suit our purposes. But:

The scientist wants to give uncolored descriptions of what exists, in so far as he is able.

Information concerning meteors, sunspots, gaseous pulsations, northern lights, etc., will come from scientists of sixty-one nations participating in the International Geophysical Year. But there will be not one word of the excitement, the joy, the awe that the observers experienced as they recorded these spectacles of our sky.

The lawyer wants uncolored descriptions of what happened, in so far as that is possible.

I recall the story of an attorney who was retained to defend a man. The attorney questioned this man. But every answer was loaded, slanted by the attitudes and personal feelings of the man:

"He took me. I was double-crossed."

"The skunk outsmarted me."

And more of such.

The attorney told me that he worked for weeks to train this man to answer questions properly. The morning of the trial came. The first question that was put to the defendant by the opposing attorney was this:

"Were you at the plant on——?"

To which the man replied: "You should live so long."

Completely baffled, the attorney shouted: "*Yes* or *No!*"

Then: "When did you last see——?"

"The last time I seen the louse, he was sneaking out ——," etc.

My friend withdrew from the case.

The buyer of a house wants an uncolored description, and he wants it as cold as a blueprint.

I am remembering now the time I thought I wanted a house in the country. A real-estate agent, a woman, took on the task of finding what I wanted. She'd call me long distance and start something like this:

I've got just the house for you.

Fine I'd say. *Tell me about it.*

It's just darling! It's a small house—

How many rooms? I'd interject.

Five—or six—I think.

O.K. I'd say, disconsolately, *Tell me more.*

The living room is tremendous.

What dimensions? I'd ask.

Well (offended) *I didn't measure it—but it's enormous.*

This continued as long as I had the patience to stand it. One day, I said:

Look. You're busy and so am I. Don't waste your time and money calling me unless you have some information. The location. The size of the lot. What the house is made of. The number of rooms—and measure them. Etc.

But can't I use any salesmanship? she asked.

No I said, flatly. *No salesmanship. Just information.*

There are times when emotive language is entirely out of order. These are the times that we must make use of

symbols as defined by Ogden and Richards. These are the times that it is essential to find descriptive words that would be acceptable to any observer—regardless of his purpose, regardless of his attitudes, etc. *House. Five rooms. 60 x 150. Two bedrooms.* Who could quarrel with this? The symbols are impersonal. And the reference of symbol to thing is subject to verification by anyone who cares to check.

Maybe you think it is easy to make impersonal statements. It isn't. We express our *selves* every time we describe something. Our purposes color our words. Our slant creeps in—almost in spite of everything we can do. The well-trained salesman has come to regard such bias as a fault. But even at this semantic-wise date[1958] many salesmen do not know a slanted statement when they hear one (and more about this later!). I had a group of thirty such men who came to the University to learn to sell better. They were amazed—and skeptical, I might add—when I suggested that the first task was to learn to report facts without "selling" them. For these men, everything they had to offer was "the best," "the most durable," "the most efficient," etc. To come clean with bare statements of facts seemed to them a waste of time. *Nor could they do it!* It took about three months before they got over the habit of using emotive language. Only then did they come to realize that strictly symbolic language is, frequently, the most powerful kind of persuasion. In this day, when the buyer knows more than the salesman about the market, competing products, etc., the salesman does well to respect his intelligence by a quiet statement of facts.

The salesman is not alone in his verbal habits. All of us use words that are laden with emotive content. It re-

quires a very special and clearheaded effort to stay with symbols that do, indeed, refer to things.

We are all reporters—or should be. We have read something. We have seen something. We have heard something. We have done something. We want to tell about it and should. If we would report accurately, we must use symbolic language.

But how? How can we use words that refer precisely to things, to situations, to events, etc.?

Ogden and Richards state that they believe grammar has an important semantic function and they recommend that this area be explored. This we did in our practical efforts at University College. Semantics is concerned with the appropriate use of words in the accomplishment of purpose. And grammar, we found, is, in itself, an effective device by which to accomplish a desired purpose.

The purpose of the report is to inform. And informative language is symbolic language.

The best sentence structure for a report of any kind is the uncomplicated *subject, predicate, period* declarative sentence. Keep these sentences simple (not compound)—one idea to a sentence, not two or more. Such sentences will be short, as they should be. If you want your symbols to refer sharply to things, don't smother them. Brevity, accuracy, and clarity are the virtues of symbolic language. In the writing of a report, "good style" means just this. Nothing more.

Eliminate all adjectives and adverbs in a report. In symbolic language, a house is a house, not a "delightful" house.

The mixture is warm you say. *Warm? I thought it was "coolish."* Give the temperature:

The boy is lazy you say. *Lazy? I admired his easygoing manner.* Say *I saw the boy lying on the grass, the lawn mower beside him.*

Watch your nouns. They are not always uncontaminated symbols.

The "dame," the "gal," the "matron," the "skirt," the "doll," the "bag," the "dish," the "lady,"—all these carry attitudes. They do refer to things (individuals) but they have emotive content that disqualify them as symbols.

Nouns such as "loafer," "moron," "ignoramus," "tycoon," "idiot," etc., carry their judgments openly. They are not, of course, clean symbols and are not, therefore, appropriate to the report. Nouns, such as "Russian," "Democrat," "Negro," etc., sometimes have hidden judgments. The word "Russian," for example, when used as a symbol, refers only to a person of Russian birth. The emotive overtones may suggest anything from a friend to an enemy, depending on the perspective of the interpreter.

A noun is supposed to stand for "a person, place, or thing." In the report, every noun should be as impersonal as symbolic language can make it.

Watch your verbs, too. These are not always simple action words:

> The woman *screeched* through the song.
> The man *prowled* in the night.

All that the symbol is entitled to say is:

> *The woman sang.*
> *The man walked at night.*

This is all an opposing lawyer would permit on the witness stand. He would ask for symbols—bare. *Just what did you hear? Just what did you see?* Nothing more.

Grammar can help.

Today you can begin to describe things as they are. You can choose words that are symbols, untainted by emotive content. This is a task that requires rigorous attention. It is so "natural" to express our selves. It is so difficult to describe without appraising.

Symbolic language, as defined by Ogden and Richards, is, at its best, the language of fact. Symbols are impersonal and subject to verification.

There is no better formula for the report.

And grammar can help.

2. REFERENCE

Ogden and Richards prefer to use the word "reference" instead of "thought." A thought, they say, can (and often does!) stay put inside someone's head. The word "reference" suggests that the thought is a reference to some*thing* in the world—i.e., to a *referent.*

It is important to remember that in the context of *The Meaning of Meaning* a reference (or thought) excludes feelings, appraisals, values—everything that is expressive of preferences, attitudes, etc. A reference is made up of symbols. The reference is cold. It points to things in the outside world impersonally. The expression of anything personal does not have the status of a reference, and is, therefore, irrelevant to the science of symbolism of these authors.

We are now confronted with an important question:

How does this restriction of reference to things affect statements of opinions, of loyalties, and of principles?

Ogden and Richards would say that opinions, loyalties, and principles are "complicated by emotional, diplomatic, and other disturbances," and are, therefore, irrelevant to the science of symbolism. They state, however (in a footnote to page 76), that "the context method of analysis is capable of throwing much light" upon that area of experience which has to do with desires and motives. This is a tempting challenge from which to extrapolate as follows:

The science of symbolism is relevant to opinions, to loyalties, and to principles. Symbolism is relevant to such attitudes and beliefs precisely in that they are, or should be, based ultimately upon facts.

The distinction between facts and opinions is not discussed by Ogden and Richards. Of opinions, they say only that they require "corroborative evidence." (page 203) And this is a good start. Today, the distinction between facts and opinions is an important one to the student of semantics.[9] We treat statements of fact differently from the way we treat statements of opinion. This will become clear as we proceed with definitions of these terms as used in this context.

Everyone knows that a fact[1957] may not be a fact[1958]. Nor can we know all about any one thing. In order to know all about any one thing, we should have to know all about everything, in which case, we should have "only one fact, the

[9] Facts and opinions will be discussed again in Part Four below in connection with Morris's uses of language.

totality of the actual world, past, present, and future," as the logician Rudolf Carnap points out in his *Meaning and Necessity*. (page 29)

For practical purposes, we draw an arbitrary "line" around a single fact. Just so, we shall make a conventional distinction between a fact and an opinion. We shall say that a statement that can be verified by impersonal means is a statement of fact—or a true statement—at that date.[10] Ogden's and Richards' reference is, then, a statement of fact—and true—when it can, indeed, be verified by impersonal means. The semantic procedure is, in such a case, to provide evidence of impersonal verification. And the matter is settled. Such verification is the difference between the public and private conception of truth.

What is an opinion?

The philosopher Mortimer J. Adler answers this question very well in *Works of the Mind*. "An opinion," he says, "is an act of the mind in which the will or the passions participate because the evidence is inadequate." (page 233)

There are some areas of experience in which we can have nothing but opinions, because, by the very nature of the subject matter, all of the evidence can never be in. Every time we make a statement about human beings, singly or in groups, we express an opinion. Every time we set up a program by which to accomplish a purpose, we express an opinion. For here we say *If we do thus and so, these consequences are likely to ensue.* But someone else may say *No, it would be better to try this in order to attain those consequences.* And yet another may say *Try this. Not that.* This is opinion because no one can know—with cer-

[10] Some recent writers use quotation marks around the words "fact" and "true" when it is necessary to remind the reader that they refer to a limited context and are relative to the state of knowledge at that date.

tainty. No one can look into the future and predict *exactly* the consequences of human activity. And yet we must predict. And we do.

When we attempt to predict in the area of human affairs, the semantic procedure is to move from facts—from what is known at that date—to opinions about what is not exactly known. And this is all we can do. Here there is no public truth to which to refer. There is, therefore, no referent. Since this is so, the semantic procedure is to move forward tentatively, and co-operatively, in so far as that is possible. We have learned that it is necessary to listen to the opinions of others. And we have learned that it is necessary to defer to that opinion which rests upon the most reliable evidence.[11]

Hitler was a man (a male human being) is a statement of fact. This statement can be verified by impersonal means. This statement may be correctly called a true reference.

Hitler was a monster is a statement of opinion because it cannot be verified by impersonal means. We judge—we appraise—Hitler as a "monster." But the maid in the Charlie MacArthur household, on visiting her family in Germany, sent the MacArthurs a post card that read: "Hitler is a good boss."

An opinion may be said to be better or worse, depending on the evidence that supports it. You and I would consider the concentration camps better evidence than the post card of MacArthur's maid. But, even though everyone in the world would agree that Hitler was a monster, consensus does not establish fact. Consensus establishes fact only when a statement can be verified by impersonal means.

In so far as the mind leaps beyond available evidence,

[11] This will be explicated more fully in Part Five below in connection with the means-end hypothesis.

verifiable and impersonal, an opinion is not a reference. The personal side of the opinion cannot be referred to some*thing* in the outside world. The personal side of the opinion resides inside someone's skin.

An opinion is an opinion because all the facts are not in. The supportive evidence of an opinion may change from day to day. For this reason opinions are kept open-end and subject to revision on the basis of more information—increased evidence —new references to things which are relevant to the opinion.

A static opinion is a closed opinion. The supportive evidence for opinions should be referred continuously to things in the world.

And *What about our loyalties?* we may ask.

Anyone will concede that an opinion is better or worse than another, depending on the supportive evidence that can be brought to bear as witness. But our loyalties, Murphy points out, are the most stable aspect of the personality —and the most difficult to alter. They derive, of course, from our cultural and social past. We are born to them. They are virtually unshakable. This we know.

Do loyalties, can loyalties, have supportive evidence? Some would say *No.* Some would say that our loyalties to religious faith, to race, to nation, etc., are not subject to evidential support. And this is the very point which, I believe, is now an issue.

If we will not countenance critical attention to our loyalties, we must accept the only alternative—that loyalties are compulsions. Today[1958], most of us don't want to be compulsive about anything, if we can help it. We have the feeling that compulsion is behavior on the low level of human potential.

We all have our loyalties, and we need them. A per-

son without loyalties, Murphy suggests, has no point of anchorage. He would have to make every decision that involves human beings afresh. But why should we not search out the references that underlie our loyalties? We could then ask, as Galsworthy did *Where do our loyalties end and our prejudices begin?*

A prejudice is a pre-judgment. And a pre-judgment is a closed judgment—one that is static—without change—inside the head.

I am reminded of an article I read in *The Saturday Review* about "the gentle prejudiced people." These gentle ones have "beautiful minds." They "think good thoughts." They "believe" in "justice" for all—regardless of race, color, or creed. Their "faith" is in "brotherly love." Their gaze is turned inward, for if, by chance, they should look outward, their "beliefs" would have to meet the test of deeds. For this, they have no stomach. It is easier to turn the back—and commune piously with the self.

Here are thoughts and feelings that go round and round and confine us like a coil.

Loyalties, like opinions, should be kept open-end and referred, from time to time, to the changing world of people and things.

Loyalties can be kept open-end by asking these questions:

Loyalty to *what?*

Now?

Where?

In connection with whom?

The answers to these questions must be stated as *symbols,* and the symbols will, of course, be impersonal and subject to verification. For this, we must forsake the never-never

land of "these gentle prejudiced people." For this, we must look outward. For this we must face the world squarely as observers. And this should give us even stronger convictions about our loyalties—*at that date.*

But what about our principles? you will persist. *Surely these are enduring!*

Why shouldn't we refer our principles to the world of people and things for periodic validation? Why shouldn't we keep our principles open-end? We live in a world of process. Everything moves. Everything changes. There was a time when the principle of free enterprise was inviolable. As time moved on, as conditions changed, antitrust laws had to be passed to protect the American people from free enterprise. Not so long ago, we held sovereignty as a firm principle. Today, millions of people are looking at that principle with inquiring eyes—*in relation to the world as it exists today.*

Keep principles inside the skull and they are closed; let them be referred to the world of people and things, and they are open-end. Take them out of the category of thoughts and place them within the framework of the "triangle."

Cool, quiet, symbolic references to some*thing(s)* in the world must surely be the springboard to opinions, to loyalties, and to principles.

Ogden and Richards give us the formula for accurate descriptions of things in the world.[12] This is the formula for testing what we think we know. This is the formula for transmitting what we do know. Could this not also be the formula for revitalizing our outmoded opinions, loyalties, and principles?

[12] Accurate descriptions are essential to our interpretations of everything we perceive in the world. See Section 25 below, for Korzybski's distinction between description and inference.

3. REFERENT

Ogden and Richards coined the term "referent," and it has stood the test of the years. You will find it in very recent semantic literature. Obviously, the word fills a need. It is a short cut for *whatever it is that the word refers to out there in the world.* It is a word that is used to refer to any*thing* outside the skin—an object, a person, an event, a situation, etc.

When you use the word "chair," that actual thing you are sitting on is a possible referent. The word *is not,* of course, the thing.[13] The symbol *is not* the referent. (Any fool knows that he can't eat the *word* "steak.")

When we use symbols, we refer to the referent. When we read or hear words, we try to discover the referent out there in the world. In every communication process, regardless of the number of people involved, the stabilizing operation is to find the referent. *What* is it? *Where* is it? *When* is it? *Who* is it?

Even very young children can be taught the importance of finding the referent. With this in mind, one mother (whom the children call "Miss Sh'Ann") teaches her third-grade Brownies to play "Find the Referent!" And to reinforce this procedure, she teaches them, also, to play a game called "Facts and Opinions."[14]

In "Find the Referent!" the trick is, of course, to be the *first* to find the referent. The referent is something in the room. The Brownies are not allowed to speak. Miss Sh'Ann explains that she will use many words that do not have referents because they describe only how she feels about things. These words will not be clues, because the

[13] See Section 26 below, for more about "the word *is not* the thing."

[14] Described in Part Four below in connection with Morris's uses of language.

referent is some*thing* in the room that everyone can *see.* But there will be other words that will have referents because they name *things,* and these are the words they must watch for. These are the clues that will lead them to the *referent.*

With hands clamped over their mouths, the children listen—and search for the referent as Miss Sh'Ann speaks:

> The clown has always been an interesting character. Many plays and movies are about clowns. There is something about a clown that is sad, I think. I suppose because he has to laugh a lot—and there are so many things that aren't funny at all. And yet the clown must laugh and make other people laugh too. Did you ever see the play *Laugh Clown Laugh*? That was a sad clown, but his mouth was painted big and wide. Only his eyes looked sad. Some artists like to paint clowns. One famous artist painted sad-looking clowns. You'd hardly know they were clowns to look at them. These clowns were father and son. You'd know that in a minute if you saw the painting —they look so much alike. Both tall and thin. Somehow, this doesn't seem clownlike, does it? And they were not very successful, I am sure, because their tights are baggy. A successful clown would be very particular about his tights, I think, don't you? Another thing about this painting, it is done mostly in a deep blue color—very somber. But I love this painting because it makes me think of all the sad people in the world who have the courage to smile and try to make other people smile.

Of course, Wendy! There it is. You are the winner! You are the first to point to the thing. You are the first to find the referent. Right there—the painting on the wall!

What were the words that had referents, Wendy? What were the clues?

First, "clown." Then "father and son." And then "painting." And "tights"! Then I knew.

And all the other words that told you how I felt—what about them?

They didn't point to the picture. They told about you.

Older children play the game too, but in a much more sophisticated way. Pam and Jill, for instance, who are now grammar-conscious, automatically disregard all the adjectives and adverbs. "Interesting," "sad," "successful," "particular," etc., are negative clues. They watch for the nouns that refer to things. And, for them, the referent need not be immediately at hand.

Grownups can, of course, play this game too. "Twenty Questions" is a variation of "Find the Referent!"

There is need to make a conscious effort to find the referent. This is the only way to stabilize the communication process. It is regrettable that most of us use a tremendous amount of words to refer a listener to a referent. We talk too much—and around the point. We don't take pains to hit sharply enough at the referent. Among the semantics-wise, the question *What's your referent?* has come to be the preferred gag.

Ogden and Richards indicate that it is necessary to find the referent in order to know whether or not a reference is true. And if the reference is true, it refers to a fact. They put it this way:

If a reference "hangs together" in the way the actual referent hangs together, the reference is true and refers to a fact.

Look, again, at the description of the house:

> Our house is on a lot 60 x 150. There are five rooms, all on one floor. The living room is 17 x 21. This faces the street on the 21-foot side. Facing the rear is a dinette, the kitchen, and the utility room. There are two bedrooms (with connecting bath), one facing the street, the other the rear.

Ogden and Richards would call this a complex reference because it is made up of several references that are related to each other. These several references refer to relationships in *space*. Suppose, from this complex reference, you drew a floor plan of the house. If this floor plan "hangs together" in the way the actual rooms in the house hang together, then, the complex reference is *true*. It is true because the separate references—together—make a verbal pattern that matches the actual pattern—the house. The separate references are, therefore, in the proper arrangement—in the proper order. And the *verbal* arrangement is precisely that of the *actual* arrangement of the referent—the house.

But Ogden and Richards go a broad step beyond this. They say that if the complex reference "hangs together" in precisely the way the actual referent hangs together, the statement is *logical*.

This is an expansion of the usual use of the term "logical." Ogden and Richards believe that logic must be concerned with something more than consistency, with something more than validity. We know that consistency between verbal statements may result in utter nonsense. Look, for example, at the following valid syllogism:

> All widows are manhunters.
> Jane is a widow.
> Therefore, Jane is a manhunter.

Here the major premise, "All widows are manhunters," is nonsense. The conclusion, "Jane is a manhunter" must therefore, also be nonsensical, even though it is logically valid.

Ogden and Richards state that consistency within a verbal system is not enough. The verbal system must be referred to some*thing(s)* in the world.

For Ogden and Richards, when a reference is true, that reference is also logical.

Notice the fine points here:

Truth is limited to matching references and referents.

Logic is concerned with matching references and referents. When a reference matches a referent, it is both true and logical.

The description of the house is a complex reference because it refers to several related referents. In a simple reference, the simple reference matches the simple referent. But in a complex reference, the complex reference matches the complex referent. In other words, it is necessary, in the complex reference, to match a series of connected statements (of fact) with a series of connected objects.

Ogden and Richards speak of "uniting relations" to refer to connections in what they call the "psychological context." The psychological context is, of course, the reference.

These authors speak of "uniting relations" also to refer to connections in what they call the "physical context." The physical context is, of course, the referent.

The important thing in the science of symbolism is to have *matching* psychological and physical *contexts*. This means, of

course, that we must have matching complex references and complex referents.

When we have a matching complex reference and complex referent, the reference is both true and logical.[15]

Ogden and Richards describe three ways in which the elements of psychological and physical contexts may be related to each other; three ways, in other words, in which the elements may be linked together:

(1) Spatial relations
(2) Temporal relations
(3) Causal relations

(1) The simple references to the house are linked together in *space*. The parts of the referent are linked together in space. If the psychological linkage (as indicated in the reference) matches the physical linkage (the referent), the statement is both true and logical.

(2) Sometimes the elements of a complex reference are linked together in *time*. When we say, for instance, *First* I went to New York; *then* I went to Chicago; and, *finally*, I went to Los Angeles, we have a series of simple references that are linked together in time. If the time sequence of the simple references matches the time sequence of the actual trip (the referent), then the complex reference is both true and logical. To say this another way, if the psychological linkage matches the physical linkage then the reference is both true and logical.

[15] Ogden and Richards are reluctant to use the terms "true" and "logical" in connection with a simple reference. The simple reference has *no context*. Remember the word "chair"? Unless we have a context, we do not know whether the reference is true or false, logical or not logical.

(3) Another arrangement is called the *causal*[16] linkage. This reference looks to the future, and is, probably, the most important of the three.

Say, for instance, that I see my friend John about to dive into what looks like shallow water. I say *If John dives into that shallow water, he will be hurt.* Why do I say this? My past experience has set up this psychological linkage: Shallow water, diving, disaster! To put this into the language of Ogden and Richards, "shallow water" is a *sign* to me of the whole psychological linkage: Shallow water, diving, disaster! So I say *If John dives into that shallow water, he will be hurt.* Is this a true reference? Is this a logical reference?

Ogden and Richards say this:

My statement *If John dives into that shallow water, he will be hurt* is true and logical if, when John dives, he is, indeed, hurt. In such a case, the physical context will match the psychological context. The causal linkage in the actual situation will then match the causal linkage in my verbal statement—in my reference. The dive into shallow water will have caused the tragedy—as expected. If the dive into the water does not hurt John, there is no referent. I was, as Ogden and Richards put it, mistaken—I was in error in my *interpretation of the sign.* Perhaps the water was not so shallow as I thought. Perhaps John was a better diver than I thought. In any case, the actual causal linkage in the physical context did not materialize. There was, in other words, no referent. The statement was, therefore, neither true nor logical.

[16] No immutability is implied by this term. It is used as a convenient way to describe a probable causal connection.

Spatial, temporal, and causal linkages are the ones most frequently used, according to these authors. Ogden and Richards refer to such linkages when they say that if the reference "hangs together" in the way the referent "hangs together," the reference is true and the logic is faultless.

This virtually unnoticed, and not always understood, aspect of the science of symbolism is important because it is the first major step toward present-day semantic theory. About twenty years ago, when observations into the communication process at University College first began, one of the preliminary research tasks was to study and evaluate publications on the subject. Very nearly all of them recommended the use of the outline as the basis for purposive communication. Examination into the formulas recommended indicated that the outlines had no *cohesive* qualities. There was nothing that bound the parts together. In our practical work, it soon became apparent that one very important aspect of the outline was the *connections* —the "uniting relations"—that held the parts of the idea together and yet permitted movement toward the completion of the whole idea. Just so, it was found to be necessary to match these verbal connections with congruent connections in the world of people and things. The linkages of Ogden and Richards do precisely that.

Because this important point is overlooked, it is stressed here as the background for the making of verbal patterns as explicated in Part Five.

Here are the essential points to be remembered, all of which are based on Ogden's and Richards' "triangle" of meaning:

The key terms of Ogden and Richards are symbol, reference, and referent.

The term "symbol" is restricted to words that refer (through references) to referents. All other words are "emotive" terms.

Symbols are impersonal and subject to verification. Symbolic language is, therefore, the language of fact. Symbolic language is, therefore, the appropriate language of the report.

We have found that grammar can help in the making of symbolic statements:

Use simple declarative sentences.

Omit adjectives and adverbs.

Be careful not to use nouns that appraise.

Be careful not to use verbs that appraise.

The term "reference" is preferred to the term "thought" because Ogden and Richards emphasize *reference to* some*thing(s)*.

When the verbal reference refers to an actual referent, the statement is true.

When a complex reference hangs together in the way the actual complex referent hangs together, the complex reference is true and the logic is faultless.

21. The CONTRIBUTION *of Ogden and Richards*

The "triangle" of meaning is restricted to the language of fact. Referential language, to use the current expression[1958], is the firm base upon which Charles Morris develops the other uses of language.

The "uniting relations" of Ogden and Richards give us, also, the basis for the making of verbal patterns. Without verbal patterns, we should be unable to present our ideas and ideals. Without verbal patterns, we should be unable

to speak of order in our inner selves, in our personalities as they become part of the field, and in the world in which we live. But most especially, we should be unable to use words by which to remake our selves and our world in improved design.

We are, therefore, greatly indebted to the pioneer work of Ogden and Richards. I have, of course, been limited to the use of symbols by which to explicate the symbols of Ogden and Richards. The referents of my symbols should be discoverable in *The Meaning of Meaning*. If you will go to the referents there, you will discover a far more detailed discussion than I have been able to include in the few pages of this *Primer*.

PART THREE

An Analysis of

Science and Sanity

AN INTRODUCTION TO NON-ARISTOTELIAN SYSTEMS AND GENERAL SEMANTICS

by

Alfred Korzybski

". . . a science of man . . ."

22. *1933 and Alfred Korzybski's* SCIENCE AND SANITY

Korzybski's *Science and Sanity* is important to us, not only because of its historical significance, but, more especially, because it anticipates a field theory of communication which is presented in Part Five of this *Primer.*

General Semantics studies the unique capacity of man to preserve experience and knowledge through the language function of time-binding. *Language binds time together; language binds the ages of man together.* The human being, unlike animals, can generalize and symbolize experience, and pass it on from generation to generation. Generalization and symbolization are functions of language upon which Korzybski throws the light of physicomathematical methods. "Through the discovery of factors of sanity in physico-mathematical *methods,*" Korzybski says, "science and sanity became linked . . ." And the link is a methodology which, for Korzybski, became "the foundation of a *science of man.*" (pages vi-vii) Korzybski introduced the term "General Semantics" to designate this methodology.

Korzybski's General Semantics is, then, in accord with modern science. Korzybski cites Einstein, who, "in his latest unified field theory, has succeeded . . . in amalgamating the electromagnetic phenomena with the general

theory of relativity . . ." (page 386). Here is the perspective from which Korzybski moves forward:

> If we take something, anything, let us say the object . . . called 'pencil' and enquire what it represents,[17] according to science 1933, we find that the 'scientific object' represents an 'event,' a mad dance of 'electrons,' which is different every instant, which never repeats itself, which is known to consist of extremely complex dynamic processes of very fine structure, acted upon by and reacting upon, the rest of the universe, inextricably connected with everything else and dependent on everything else. If we enquire *how many characteristics* we should ascribe to such an event, the only possible answer . . . is that we should ascribe to an event infinite numbers of characteristics . . . (page 387)

Here we have process, uniqueness, and relatedness. But what is of equal importance to us is the fact that Korzybski states that "the only possible link between the objective world and the linguistic world is found in *structure, and structure alone.*" (page 61) Such a conception of language underlies the necessity for the making of *verbal patterns* in order to represent something—anything—in the world.

The two terms "semantics" and "General Semantics" may confuse you. You will recall that I defined the word "semantics" as I use it. (Others may, and do, of course,

[17] Notice the use of the word "represents" in this quotation. In non-technical language, "represents" and "refers to" may, of course, be used interchangeably. But the student of semantics will use this difference in terminology to distinguish Ogden's and Richards' "science of symbolism" from Korzybski's "science of man." We shall reserve the term "refers to" for symbols that have referents in the outside world of people and things and use the term "represents" (or "stands for") in this section, as Korzybski does, for *all* words. Korzybski's General Semantics is concerned with *all* language—as one aspect of the organism-as-a-whole-in-an-environment.

define it differently.) I use the term to refer to the study of words—how to use them (and how not to misuse them) to accomplish a foreseen goal. Korzybski's objective is much more broad. He uses the term "General Semantics" to represent a new approach to the study of man in his unique human language function. He also uses the term to represent a method. This method uses principles abstracted from the exact sciences to promote "sanity"—the sanity of the individual and the sanity of society as a whole. This, of course, explains his title *Science and Sanity*. "Science" as means; "sanity," the end.

We proceed now to the semantic devices which will assist the communicator in changing the structure of the language system to conform with the structure of the objective world—a basic requirement in Korzybski's approach to the study of man.

23. DATE EVERYTHING *to show* PROCESS

The semantic device of dating words, facts, and opinions stems from the basic assumption of modern science that all nature is process and that there is, therefore, constant change. "Transformation" is the word Korzybski uses, and it is an important word as we shall see later.

The user of words is engaged in a communication process. Change with the passing of time is one aspect of nature which the communicator cannot ignore. When we date something, we indicate by that date that process—change—transformation—takes place continuously:

John Jones^{1950} *is not* John Jones^{1957}, etc.
Piano^{yesterday} *is not* piano^{today}, etc.

Fact[1957] *may not be* fact[1958], etc.
Opinion[1957] *may not be* opinion[1958], etc.

Today, even a child knows that nothing is static. From the terrifying field inside the atom to the universe as a whole, nothing is static. Everything moves.

But our senses help us to stabilize our moving, changing world. We cannot see the bacteria that dance in the water we drink. We have no realization, through our senses, of the process that is called a rock, a statue, a skyscraper, a mountain. Our senses spare us. Our senses compress *time* so that light-years become a mere blink of the eye. Our senses compress mass and motion so that vast spinning constellations appear as mere specks, stationary in the midnight blue. "Stars," we call them; and, by so calling, *fix* them in time and space. The limitations of our senses help us to forget about incessant process and constant transformation.

Our language, too, stabilizes our moving, changing world. We can designate the conglomeration of dancing atoms as a desk, a chair, a church, a barn, a tree by the use of words that ignore motion and changes in time. The word "desk" is as stable, as fixed, as unchanging as the "substantial object" that holds my typewriter, my books, my papers, etc. When time and process and change are not relevant to our interests, we can ignore them. And our words will help us do this. This is good. We may safely talk about a desk, a chair, a slab of stone, without regard to process and change.

But words that stop time and process and change may be obstacles to communication. The course of human events involves changes in time that cannot be ignored. When this is so, our words must, somehow, contain and com-

municate process—and change. This is not easy. Our words can stop process very like a stop watch. The sign "Fresh Eggs" is such a stopper, as most of us have learned the hard way. In order to put time into that sign, we would have to clock each egg from its birthday to the frying pan. *When did you get these eggs?* is a sensible question. But even this won't help much. *When were they laid?* And *How long were they en route?* And *Were they refrigerated?* The grocer would probably walk away—backwards—if we used this line of questioning.

Process is, of course, most significant when we think or talk about people. All too often we talk about a person or an incident—a happening in which people are involved —without regard to process and changes in time. We freeze human behavior—like a photo finish. The human being lives—and acts and moves and changes. He is never twice the same. But all this we stop, as effectively as *rigor mortis.* We describe John Jones in stop-watch language. He is "lazy" or "industrious"; a "shmo" or a "brain"; "shady" or "honest"; etc. If we would date these statements and keep them open-end for a fresh look tomorrow, these words would become legitimate appraisors that express someone's opinion—*at a date.* But we are not careful about this, and "the word" is passed—*John is "lazy"* last year, now, and into eternity.

If we date John at any moment in his life, we shatter the "permanence" of the judgment; we keep it open-end and subject to change.

The habit of dating ideas, experiments, etc., is custom to the scientist. The habit of dating reports, charts, etc., is custom to the business or professional man. Obviously, we cannot date our words the way the businessman can

date his profit-and-loss sheet, the way the nurse can date her chart, the way the lawyer can date his facts. But if we will let the idea of constant transformation get under our skins, as Korzybski suggests, it will work for us on the unconscious as well as the conscious level.

The semantic device of dating reminds the user of words that "permanence" is just one way of "looking" at things. It keeps us alerted to change when change may be important to our interests.

The relevance of this to the communication process is immediately apparent. The static way of looking at people and things puts us out of step with the process world, as Korzybski points out. When we assume that nothing has changed and nothing will change, we stand as still as the process world will let us while transformation takes place all around us. The result is that we are jarred every time something unexpected happens. We are pushed; we are thrown off balance. And we are incapable of making the necessary adjustments in our use of words toward the accomplishment of goals.

The unexpected is one of the natural hazards of living. For all of us, any radical change from familiar surroundings or circumstances is likely to be disturbing. Even little things may agitate us. To the person who is accustomed to sitting behind a desk, a sudden shift in position to the front of someone else's desk may make his collar wilt and his voice quaver. And yet it is the unexpected—the unpredicted—that is informative! When the expected—the predicted—happens, *this adds nothing to what we already know.*[18] For this reason, it is imperative that the communi-

[18] See Shannon and Weaver, *The Mathematical Theory of Communication*, p. 103.

cator develop a degree of uncertainty-tolerance. For unless he does, he closes himself to *new information* that is invaluable in goal-seeking behavior.

Perhaps it has never occurred to you that every time we use words *we are asking for change.* We use words because we want something. We want something different. We are asking for change, but a particular kind of change. No other kind of change will do as well. If we expect the unexpected, the most natural thing in the world is to try to anticipate the kind of change that is likely to occur. We make every effort to predict the consequences of the existent state of affairs. But we are aware, also, that when the unpredicted occurs this is the source of new information which we may use profitably in the interest of purpose. We are alert and ready. And flexible. We adjust. This, of course, increases our control of the changing scene. And we are more intelligently prepared to mold change to our interests.

Korzybski says *Date everything*—in your thinking-feeling-doing. Let your language system and your nervous system conform, in this respect, with the structure of all of nature.

This will make room for transformations in time.

This should develop your uncertainty-tolerance.

This should sharpen your efforts to predict.

And this should help you to use words to control and direct change, expected and not expected, in the interest of your purposes.

But this basic assumption of process, and the semantic device of dating that conforms with it, will help us, also, in our relationships with others. Change calls for a fresh look. It calls for the question *What's different about this human being today from yesterday?*

Thus a science orientation of space-time leads to a semantic device that will shatter the permanence of a static judgment of another human being.

24. INDEX EVERYTHING *to show* UNIQUENESS

Another basic assumption of modern science is that everything is unique; that everything is different from everything else in the world; that nature designs originals.

Korzybski's semantic device for indicating the uniqueness of every person, thing, situation, etc., is the index:

Human being$_1$ *is not* human being$_2$, etc.
Home$_1$ *is not* home$_2$, etc.
Boy$_1$ *is not* boy$_2$, etc.

Even though everything is unique, everything can be classified. You and I are different, but both of us can be classified as "human beings." Your ranch house and my apartment are different, but both can be classified as "homes." David and Johnny are different, but both can be classified as "boys."

We classify, of course, on the basis of similarities. There are basic similarities in all human beings; there are basic similarities in all homes; there are basic similarities in all boys, etc.

Every word is a class word, with the possible exception of proper nouns. (Look into a telephone book and see that even the same proper noun may represent many individuals.) Verbs are class words in that each represents a class of action. "Run" represents a class of action that is different from another class of action, "walk," for example. Syntactical terms perform class functions.

The common noun is, of course, a class word. The word "boy," for instance, includes within its meaning only the similarities of the class of boys.

When we index the class word "boy"—boy_1—the *word* points to the similarities of the class it represents, the *index* points to the differences left out—to the differences in this particular member of the class of boys.

Our language system makes it impossible for us to describe the absolute uniqueness of anything.

The word "boy" can't tell you a single thing about any boy in the world that is different from any other boy in the world. The word "boy" is a label, to use Korzybski's term, that can be put on *any* boy. The meaning of the word includes only what is common to every boy in the world. The word "boy" tells us that the object it stands for is a male human being within a certain age group. And that is all. To put this into the language of Korzybski, the word abstracts (takes away) from the whole object (this boy I can point to) only the similarities of all boys—and leaves out all of the differences.

If I begin to tell you about my boy so that you will know he is different from yours, I can use a lot of words. I can say, for instance, *He's mischievous but lovable. He's clever with his hands but slow with books, especially English. He's good-looking in a boyish way—wide-open inquiring gray eyes and a good forehead. Thin as a rail, but strong. And agile as a cat.*

You begin to "see" my boy, and you know right away that he is different from yours. *Mine,* you will say, *is roundish and slow; not so good with his hands, except when he draws. His eyes are brown and deep-set, and his*

hair has a way of coming down into his eyes. Not so good-looking, but affectionate and considerate . . . And you can go on and on.

Both of us have used words, many of them, but both of us know that if we used all the words in the dictionary and invented a few more to describe one particular boy, we could never get to the absolute uniqueness of that boy. Look at the words you and I have used to describe our boys:

mischievous	books	roundish
lovable	good-looking	eyes
clever	boyish	brown
hands	agile	thin
slow	cat	strong

Every one of these words is a class word. *Thin?* How is one thin boy different from another thin boy? The word won't tell you. *Agile?* How is one agile boy different from another agile boy? The word won't tell you. *Eyes?* Everyone has eyes. *Gray eyes?* How is one pair different from another? The words won't tell you. All that a word can do—any word—is to include in its meaning only the similarities of the class that it represents. It must leave out all of the differences.

This is the way with words, and we can't get around it:

Boy$_1$ *is not* boy$_2$, etc.
Agile boy$_1$ *is not* agile boy$_2$, etc.
Gray-eyed agile boy$_1$ *is not* gray-eyed agile boy$_2$, etc.

The word points to the similarities of the class; the index points to the differences left out. Here, the index reminds us that no two persons in the whole wide world are exactly alike. There are similarities, of course, but, as Korzybski puts it, no identity—no " 'abolute sameness' in

'all' aspects . . ." (page 194) No two persons are identical, not even identical twins.

You may be willing to admit that words can never tell all about your boy and that it might be a good idea to use the index to point to the differences left out. *But what about things?* you will ask. *How about the automobiles that come off the production line? Aren't these all "the same"?*

When we talk about things, we are usually interested in the similarities of the class, and not in the individual differences left out. When we buy a car, we are interested in the make and the model and the price. We are interested in the similarities of all Buicks, Model 60. We are interested in the class, "Buick, Model 60."

We can safely talk about a desk, a chair, a G.E. toaster, a Buick, without regard for its absolute uniqueness. We have no trouble doing business. We use as many words as we need (all of them class words, to be sure) to describe the thing we are talking about, and we can forget that we can never get to the differences left out. When we order Desk #157, Mahogany, we are not interested in the absolute uniqueness of the desk. We are not, for instance, concerned with the trees that produced the wood; we are not concerned with how they grew or whether or not they had their place in the sun. We are interested only in the similarities of all Desks #157, Mahogany. But if there were two of them on the floor, we'd probably prefer one to the other. There'd be something about the grain, maybe, or the finish. Something . . . We'd look them over and say *Send me this one, not that one.*

I am remembering how, some years ago, I decided that the Conover piano was in my price range and the make for me. The salesman took me into the stockroom. He sat

down and played every Conover in the place. Finally, he said: "This one." They all looked alike and sounded alike to me, of course.

Everything that is man-made or made by machines that are man-made is unique. Any dealer will tell you that every car is different—different in those ways over which man has no control. Every dealer will tell you that every now and then a lemon comes off the production line. Why, nobody knows. Every new car has bugs of one kind or another, they will tell you. And what flyer will ever forget the gremlins that plagued him during World War II? Out of the nowhere, something went wrong. A piston. An oil pump. The motors. And a plane would plunge into the sea! "Gremlins," they were called, for want of a better name to describe the differences left out—those differences that, unaccountably, spelled disaster.

$Desk_1$ *is not* $desk_2$, etc.
Desk #157, $Mahogany_1$ *is not* Desk #157, $Mahogany_2$ etc.
$Buick_1$ *is not* $Buick_2$, etc.
Buick 1958_1 *is not* Buick 1958_2, etc.

The meaning of a word cannot go beyond the similarities of the class of objects it represents. Every word is an abstraction. It abstracts (takes away from the whole object) only the similarities of the class it stands for—and leaves out all of the differences.

We accept the fact that our words do not tell all,[19] but we must proceed accordingly.

Sometimes it suits our purposes to emphasize similarities. Frequently it is intelligent to ignore the differences left out. When we are ordering Desk #157, Mahogany, the

[19] See Section 28 below, The Etc. to Avoid Allness.

differences left out are not important to us. But when we talk about Paroled Prisoner #157, Negro, a knowledge of the similarities that are compressed in the words "paroled prisoner" won't help us a bit to judge his fitness for a job. We will want to know all we can about *him*—about *his* personal background, *his* family, *his* attitudes toward life, *his* skills, etc. We will try, by the use of words, to get as close as we can to his individual uniqueness. Only so can we differentiate between Paroled Prisoner #157 and every other paroled prisoner. But, however many words we use, we can never tell *all* about Paroled Prisoner #157. The verbal world is not the actual world—and there is an unbridgeable gulf between the two.[20] This the student of General Semantics never forgets.

The word "stereotype" is an important one in the literature of semantics. It is associated with "permanent" judgments that attach to an individual member of a class. A stereotype is, of course, used in printing. It is "a one-piece plate cast in type from a mold." But human beings do not have "unvarying form or pattern." We shatter the stereotype "Negro" by affixing the index; we shatter the stereotype "prisoner" by affixing the index. We break the "plate cast"; we break the unvarying verbal pattern by affixing the index.

When we talk about groups of human beings, we must be even more careful to index the individual members of the group. This is the only way that we can point to the uniqueness of every member of the class.

When we talk about Hungarians, or Arabs, or Jews, or Catholics, or Protestants, or Negroes, or teachers, or

[20] See Section 25 below, The Vertical Index for a More Mature Humanity of Words.

farmers, or laborers, or mechanics, or doctors—or any group, any class—we can't throw them into sacks and label them like potatoes and forget about the differences left out. Every human being in the whole world is unique. No two are *exactly* alike. At most, there is similarity, never identity. No two members of the same class are *identical.*

Strictly, the only thing we can say about all Hungarians is that they were born in Hungary (or are of Hungarian nationality); the only thing we can say about all Jews, again speaking strictly, is that they are human beings who subscribe to the Judaic faith; the only thing we can say about all Negroes is that they are human beings who are members of the Negro "race"; the only thing we can say about all farmers is that they are human beings who own or run farms.

I once heard Robert Hutchins (then) Chancellor of the University of Chicago say: "This is tautological, therefore true." I didn't know what he meant at the time but it makes a lot of sense to me now. If you call a boy "a boy," this is tautological (repetitious), and therefore true. When you say *Boys will be boys* you can't go wrong! No truer words were ever said. And there is very little more you can say about all boys and speak the truth!

Again, Korzybski suggests that we let this semantic device of indexing get under our skins. This should help us in two ways:

1. Our perceptions and conceptions of *similarities* in different persons, things, incidents, situations, etc., should be sharpened. As a result of this, we should choose our words more precisely for their utility in transmitting similarity.

Every word is a class word, of course. But some class

words take in more territory than others. If, for instance, I am talking about reading in Wendy's fifth-grade room, it may be very confusing to others to discuss this under the class word "education." "Education" stands for so much more than the reading in Wendy's fifth-grade room that I am likely to disperse the responses of my listener—or reader. If we keep our words broad enough to cover the similarities we have in mind but not so broad as to go beyond the scope of those similarities, we are choosing our words precisely for their utility in transmitting our ideas.

2. Our perceptions and conceptions of *differences* in similar persons, things, incidents, situations, etc., should also be sharpened. As a result of this, we should have a more sophisticated understanding of the limitations of words. Here the index (used silently or actually) will help us choose our auxiliary words with attention to the differences left out.

Korzybski says, index everything to point to uniqueness.

A word is an abstraction. It abstracts (takes away) from the whole object only the similarities of the class to which the object has been ascribed.

The word points to the similarities; the index to the differences left out.

When we talk about things, the differences left out may or may not be important. When we talk about people, the differences left out should never be forgotten.

Thus a basic assumption of modern science leads, again, to a semantic device that will remind the human being to ask the question *What's different about this member of his class?* And this is another step toward a more intelligent use of language for human ends.

25. *The* VERTICAL INDEX *for a more mature* HUMANITY OF WORDS

We may call the index that Korzybski uses to point to uniqueness the *horizontal index*. In the horizontal index, the meaning of the class word remains the same. If there were ten boys in a room and we indexed each boy by a distinguishing number, the meaning of the word "boy" would remain the same. And the index would point to the differences left out by that class word.

But it is necessary, also, to understand the *vertical index*.[21] Basic to everything else, Korzybski says, is *consciousness of abstracting*. The vertical index, which differentiates the orders (or levels) of abstraction, is the device that clarifies the process of abstracting. Attention to the vertical index will help us avoid four common and very obstructive semantic errors.

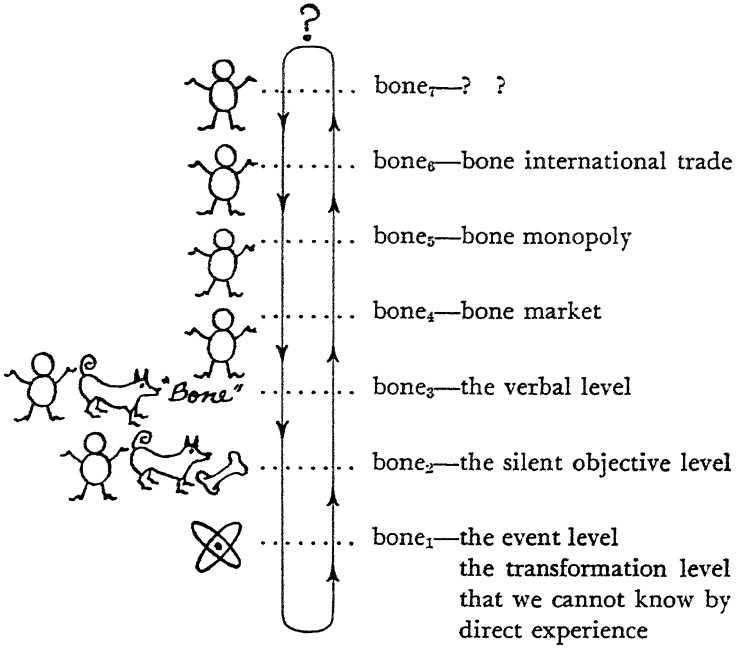
First, let us examine the vertical index. The model on the opposite page represents my understanding of the abstracting process.

Notice, first, the "circularity of knowledge." The arrows in the model go upward and downward, and upward again.

Now look at the level of bone$_1$. Korzybski refers to the level of bone$_1$ as the *event*—"the mad dance of electrons." Though we cannot know this level by direct experience, it represents "at each date the highest, most verified, and most

[21] Korzybski devised a diagram, which he calls the "Structural Differential," to show the process of abstracting and to train students in consciousness of abstracting. Korzybski states that consciousness of abstracting includes the recognition of the horizontal and vertical stratification of human knowledge. (See *Science and Sanity*, p. 476; also pp. 371-490.) Indexing is the device that keeps us aware of abstracting. We must not only index everything to show uniqueness; we must index, also, to show differences in order (or level) of abstraction. I call these two ways of indexing the "Horizontal Index" and the "Vertical Index."

reliable abstractions. . . ." (page 397) Rebel, the dog, is out of the picture at the level of $bone_1$. His nervous system is also unaware of this level. And Rebel has no science, no assumptions about the structure of the world.



Rebel, like us, is interested in $bone_2$. This represents the sensory level of experience (with or without the aid of instruments). This is the macroscopic level of abstraction. This is the level at which Rebel smells, sees, and tastes the *thing*. For us, too, this is the *silent* level of firsthand experience—of seeing, of eating, of enjoying the thing.

Do not think that this silent level is subjective, merely inside the skin. Korzybski refers to this level, wisely, as

the silent objective level. When we see, we see *something.* When we enjoy, we enjoy *something.* Etc. We must be aware of the objective nature of firsthand experience, Korzybski says, in order to have the proper orientation to life. Such an orientation he calls *extensional* as contrasted with the intensional orientation that emphasizes words, "thoughts," definitions, ideas and ideals, but apart from the world of people and things.

But this silent level is neither suppressive nor repressive of words. This is the deep living level which *is not* words and which cannot be reached by words alone. Korzybski says that most of us have difficulty in reaching the silent level of wordless experience. We are verbalizers. We are "thinkers." And so we vitiate the un-speakable level of the *pure experiencing* of a sunset, a symphony, companionship, etc. We forget that between the silent level of actual experiencing and the verbal level of description there is an unbridgeable gulf.

Note now the level of $bone_3$ on the vertical index.

It is quite possible that Rebel will respond vigorously when you say *Come, boy! I've got a bone for you!* Rebel will understand. He may even "speak." The *label* "bone" —$bone_3$—has meaning for him. But Rebel doesn't know how intelligent he is. He doesn't know he is abstracting the similarities of the class of bones and leaving out all of the differences.

But Rebel is done with abstracting at this point. He cannot move from his firsthand experience with the thing to more general "bone" contexts. He cannot move, for instance, to the broader context of the bone market; thence to the broader context of bone monopoly; thence to the broader context of international trade in bones, etc. (each level of which subsumes the lower levels).

Man alone continues to abstract in higher and higher orders, but sometimes with uncertain steps. Here are the four semantic errors which the vertical index can help us to avoid:

1. The verbal world—bone$_3$—*is not* the objective world —bone$_2$. The word "bone" *is not* the thing. And yet, Korzybski says, we are inclined to identify these two levels of abstraction.

I, myself, had an experience a few weeks ago that convinced me that under tension even the semanticist will fall into this trap. Jill, one of our girls, was in the hospital for diagnosis. We were terrified when the attending doctor told my medical husband that leukemia had not been ruled out of the blood picture. In talking with my husband, I just couldn't bring myself to *say the word* "leukemia." The word itself was abhorrent, and wouldn't pass my lips. Now I can say it, and remember the blessed gulf between the *word* "leukemia" and the dread *thing*—the condition called leukemia.

Korzybski would, of course, call such behavior "unsane" because it identifies two levels of abstraction—the word and the thing.

The identification of word and thing (of two or more orders of abstraction) may throw some light on the effectiveness of advertising. We respond to ads, frequently, without a sober thought to the product on the floor. The ad that makes the greatest promise of satisfying a need is the one that "sells" us. One businessman told me that sales records show that our gullibility[22] extends to the price tag. When we see one tag marked $200 and another marked $117 for

[22] See Morris's Misuses of Language: The Pitfall of Gullibility, Section 38 below.

what appears to be the same camera, we do not ask for evidence concerning justification of the higher price. We reason like this:

> The price tag is a sign of quality.
> This price tag is higher than that one.
> Therefore, this product is better than that one.

Here is identification of price tag with quality—two distinct and different orders of abstraction. Korzybski calls such behavior "unsane" because the human being does not exercise consciousness of abstracting—his unique human potential.

Korzybski points out, as Gardner Murphy does in another context, that the language system and the nervous system are one and inseparable. Perhaps this accounts for the fact that even intelligent people may identify the word and the thing. Perhaps this explains why the word "leukemia" sets up unmanageable disturbances; perhaps this explains why we drool when we hear the word "steak"; perhaps this accounts for the fact that our wants, our longings, our desires, our needs fasten themselves on enticing words as if they were things.

Attention to the vertical index will remind us that the verbal world *is not* the actual world; that the word *is not* the thing.

But there is more to it than that.

People who confuse the word and the thing are what Korzybski calls "verbalizers." These are the ones who abhor silence; these are the ones who believe that life is lived not on the silent objective level but on the verbal level of abstraction. Such people, Korzybski says, need to be trained —one hand over the mouth, the other pointing—until they

recognize the inescapable fact that *silent experience with the thing cannot be reached by words alone.*

If life passes us by, perhaps it is because we do not, we cannot, we will not live it on the silent wordless un-speakable level of objective experience; on that level which F. S. C. Northrop calls the level of "pure fact."

2. The vertical index can help us enormously in our interpretation of facts and the value judgments that we make. Again, it is a semantic error to fail to distinguish between two levels of abstraction.

The level of abstraction that was designated as $bone_3$ is the verbal level that is closest to the un-speakable level of firsthand experience with the thing. This is the *descriptive* level of abstraction. Here is a sample of such language:

I saw a man come out of that door with a package under his arm, look to the right and to the left, and then run to that alley.

From this descriptive level, we move to the level of *inference.* Here is one interpretative inference that could be made from the above description:

The man was afraid of being seen.

And how easy it is to move from this interpretative inference to the valuative inference:

I saw the thief come out of that door and run down the alley.[23]

All of us move from description to inference. Every time we interpret a descriptive statement, we make an inference. There is no other way. But it is important to note, as Korzybski points out, that the descriptive level *is not* the level of inference. If we react to an inference as if it were

[23] See William M. Sattler, "Inference and Prediction as Communication Barriers," *The Personnel Journal* XXXVI, No. 4, September, 1957.

a description, we blur what evidence we have to support the inference. We destroy the criteria by which to evaluate the worth of an inference.

The descriptive level is more reliable than the levels of inference, first, because the descriptive level should be essentially similar for all competent reporters; and, secondly, because various inferences may be drawn from the same description. The following description, for example, may be accurate and impersonal:

Mrs. A passed me on the street this morning and did not greet me.

This description may be the basis for several possible interpretative inferences:

Mrs. A was preoccupied.

Mrs. A is shy and waited for me to greet her first.

Mrs. A is nearsighted.

Mrs. A was looking straight ahead and didn't see me.

Etc.

But we are likely to move from an interpretative inference to a value judgment inference with the merest flip of the tongue:

Mrs. A is a snob.

Mrs. A is a narrow-minded anti-whateveryouhappentobe.

Etc.

This is opinion based upon opinion—twice removed from the level of description![24]

The "sane" order is from description to inference, from observable fact to opinion.

To confuse the levels of description and inference is to obliterate the criteria by which to evaluate the worth of the inference, whether it be interpretative or appraisive.

[24] See Morris's distinction between designative and appraisive language, Part Four below.

3. There is another kind of confusion on the verbal level that should be avoided by every user of words. This semantic error occurs whenever we treat a verbal statement *about another statement* as if both statements were abstractions of the same order.

I am recalling now the fact that one author made a minor error in one of his books. But because the author was well known and highly respected, this error found its way into many other publications, but always with a little different emphasis, a little change of one kind or another. The final account was so garbled that the original author was moved to trace the history of the transformation of his original insignificant error to its final nonsensical form.

We read and we listen. We talk about what we read and what we hear. Someone else listens—and talks to someone else. Etc. We can talk about talk about talk, etc. This, Korzybski calls *self-reflexiveness*. The important thing to be remembered in this connection is that statements about statements are probably less reliable than the original statements.

A statement about another statement (perhaps a description, perhaps a statement about a description, etc.) should not be considered to be of the *same* level (or order) of abstraction as the original statement. These are two levels of abstraction which must be differentiated.

4. A fourth semantic error that can be avoided by attention to the vertical index is concerned with the use of the same word on different levels of abstraction.

We know, of course, that many words may be used with different meanings, depending on grammatical usage, context, etc., but the vertical index is concerned not with differences in grammar or context but with different levels

of the abstraction which relate to the same general context. Notice how the word "education" may be used on various levels of abstraction:

?	$education_8$
education through all of life	$education_7$
education through college	$education_6$
education through high school	$education_5$
education through elementary school	$education_4$
fifth-grade reading program	$education_3$
Wendy's reading lesson	$education_2$
?	$education_1$

Notice that $level_3$ includes $level_2$; that $level_4$ includes $level_3$ and $level_2$; that $level_5$ includes $level_4$ and $level_3$ and $level_2$; etc. We move from the particular incidents of Wendy's reading lesson to general statements about these (and other) particular incidents. As we move to higher levels, the class terms become broader because they include subclasses on lower levels of abstraction. But, as we move to higher levels of abstraction, the class terms say less and less about the individual subclasses they include; and, of course, nothing about the particular individuals or incidents that provide the material for the subclasses. But it is important to remember the circularity of knowledge. It is necessary, always, that these higher level abstractions be validated directly or indirectly by reference to particular things, incidents, etc.

I can, of course, use the word "education" in discussing any one of many levels of abstraction. And, because the whole general context is conjoined, it is very easy to slide from one level of abstraction to another without an awareness of the shift. The semantic blunder derives, not from the shift from one level to another, but from inattention to

the shift . . . I am remembering the night I talked for hours with a friend about education. The conversation didn't seem to be getting anywhere. I suddenly realized that he was talking about "education" for everyone, formal and informal, whereas I was talking about "education" in the universities. The scope of the broad context of education was, in each case, different. We were using the same word, but were talking on different levels of abstraction. Our words traveled in parallel lines that did not meet.

Korzybski uses the term *"multiordinality"* to describe a word that may be used on "multi" (many) "orders" (levels) of abstraction. Most of our discussions center around such terms. It is important to note that we must, frequently, move from one order of abstraction to another. I may, for example, be talking about "civil rights" and the equal right of everyone to fulfill himself to the best of his ability. But say that you are remembering with heartache and bitterness the cold hard fact that you were denied admission to a medical school because the "quota" for your "race" or religion had been filled. It is quite possible to move, profitably, from the lower level of your personal experience to the higher levels concerning "civil rights" in general—and back again, if need be. Our only responsibility here is to stay together, to know just what level we are on and to make it clear to other participants.

It is the responsibility of the user of words to clarify, for himself and for others, the level of abstraction of a multiordinal term that is relevant to the discussion.

Only man can move from the reading lesson of one child to high order abstractions about education, formal and informal, for everyone. Only man can move from a particular personal problem to the general problem of civil rights for

all. Only man can pyramid one idea upon another, thus to expand knowledge. Only man can move from abstraction to abstraction, and never reach the top. For to reach the top would mean, as Carnap points out, that we should have only one fact—a highly abstract fact that would include all knowledge about everything in the universe. We move from particular incidents to generalizations, to theories, etc.—to higher and higher orders of abstraction—but we must validate our increasing knowledge always in particular incidents.

We use the vertical index to differentiate levels of abstraction, but we must be aware of what Korzybski calls "the inherent circularity in the structure of human knowledge." (page 220)

26. The HYPHEN *to show* RELATEDNESS

The relatedness of all things in nature is another basic assumption of modern science. Nothing is isolated. Nothing stands alone.

Words have a way of separating things that are not separated in nature. Space and time, physicists tell us, cannot be separated. For this reason, the hyphen is used to unite these two aspects of the physical world. "Space-time," they tell us, more accurately describes the actual state of affairs.

All of us use separators. We speak of the "mind" as if it were something completely separated from the "body"; we speak of the "intellect" as if it were altogether "uncomplicated" by the "emotions"; we speak of "thoughts" as if they were simon-pure and cut off entirely from "feelings." Korzybski calls such terms *elementalistic* because they ex-

tricate one aspect of a broader situation-as-a-whole and set it apart as an element—*isolated,* and separated from that broader situation of which it is a related part. Korzybski suggests that we use hyphens habitually to connect separators. Psychologists tell us that hyphenated terms such as body-mind, intellect-emotion, thought-feeling, etc., more correctly designate the relatedness of the various aspects of human behavior.

Not so long ago, I went to a public lecture to hear a well-known psychologist speak. I was rather surprised to hear him use the word "mind"; but, because I respect him so highly, I felt that he must have some justification for the use of this separator. So, during the question period, I rose to ask: "Would you define the word 'mind,' as you use it, please?" He seemed disturbed by the question and said that the word "mind" refers, really, to the nervous system. I was told later by the chairman that the speaker considered this a "hostile question." The term "mind" is, obviously, passing out of usage in psychological circles.

Some years ago, it was fashionable to debate whether heredity *or* environment was more important in the personality development of an individual. It did not seem to occur to the debaters that these two phases of human existence are inseparable. Today, it is common knowledge that there is a kind of transaction (trans-action) between the two. Heredity and environment are inseparable processes.

The assumption of relatedness stems from the physical sciences and makes its way to the sciences that deal with life. General Semantics takes the further step as a social science that is concerned with constructive relatedness—as accomplished by change in the structure of language to conform with the structure of all of nature.

A great many of our separate words stand for relationships between people and things. The word "communication" is, of course, such a term. "Conversation" is another. People who talk without listening do not rightly understand this word.[25] *Con* is a prefix that means "together"—"with." (It would seem that many of us confuse this prefix with the abbreviation of the Latin, *contra,* which means, of course, "against"!) "Interaction" is a word that stands for reciprocal action. But in the literature of psychology and communication, we find, more and more often, the use of the word "transaction" to replace "interaction."

The word "transaction" is worth pausing over because of its importance in field theory of communication. Everyone is familiar with the use of this term in the context of business, but it found its way into the literature of psychology mainly through a work of John Dewey and Arthur F. Bentley entitled *Knowing and the Known* (1949). *Trans* (from the Latin) means "across" "over" (perhaps, originally, present participle of a verb meaning "to cross"). The word "transaction" is used in recent literature to designate a "crossing-over" of the relevant aspects of a situation-as-a-whole. Change in any one aspect of the situation-as-a-whole causes change in all other aspects. In knowing, for example, there is always (and inseparably) the known; in perception, someone perceiving and something perceived. So, also, with the word "stimulus." Psychologists are loath, today, to use the word "stimulus" as if it were an isolated phenomenon, apart from response. And both scientists and artists are reluctant to use the word "observer" apart from what is observed. Even in the field of ethics, transactional psychology has its usefulness. The theologian Max

[25] See Section 47 below, Field Theory Applied to the Speaking-Listening Transaction.

Kadushin, for example, goes so far as to state in *The Rabbinic Mind* (1952), that terms such as "mercy," "freedom," etc., become value-concepts only when there is transaction between at least two human beings—when, for example, a judge is merciful to an unwitting culprit, when fair employment practices become an actuality, etc.

Transaction is a word that should find its way profitably into everyday language. There is no buyer without a seller; there is no borrowing without lending. When a woman says *My husband* she proclaims transaction, inseparability of husband-wife. And the important thing to remember, of course, is the fact that change in one aspect of the transactional situation-as-a-whole causes change in other aspects of that situation-as-a-whole.

But Korzybski is interested[1933] in attacking the elementalism implied by separate words, which, when joined together by the hyphen, more correctly represent what exists. Transactional psychology is an extension of Korzybski's non-elementalism.

One very important use of the hyphen is to join areas that were not formerly considered to be significantly related. I suspect that the word "psychosomatic" was at first written (or, at least, thought of) as "psycho-somatic." Here is a term that is equivalent to "mind-body" which was put to use in the interest of medicine. As Morris suggests, the advance of knowledge is accompanied by "experimentation with sign compounds."

Now and then we still run across the word "electromagnetism" used in hyphenated form, although the oneness of electricity and magnetism is accepted as a matter of fact[1958]. Eventually such hyphenated words drop the hyphen and openly express inseparability.

The hyphen is a simple but useful semantic device by which to show relatedness between various aspects of human behavior. Again, if we will let this device get under our skins, the language system and the nervous system will be in accord with the stucture of things as they exist in nature. And, again, Korzybski says, this is essential to "sanity."

27. QUOTES *as a* SIGNAL *for attention to a word*

Korzybski called quotes "danger signals" and their use a "safety device" equivalent to saying *Don't speculate (or argue) on this term, it is "elementalistic," misleading, etc., and/or in general implies a structure not similar to the structure of the "territory."* In speaking, Korzybski would raise his hands above his shoulders and crook his index fingers every time he wanted to call attention to a word for one reason or another. There are at least five good reasons for the use of quotes:

1. Perhaps we should use quotes on the silent level of inner experience for every word! This would insure consciousness of abstracting.

We know that every word is an abstraction, but we forget. We know that every word is a class word that abstracts (takes away from the whole object named) only the similarities of the class to which the object is ascribed and leaves out all of the differences. But we forget.

We forget that boy_1 *is not* boy_2, etc.

We forget that Desk #157, $Mahogany_1$ *is not* Desk #157, $Mahogany_2$, etc.

Use quotes on the silent level of inner experience to insure consciousness of abstracting.

Consciousness of abstracting alerts the communicator to the fact that communication between people is always approximate, and never complete.

2. But we'd better crook our fingers, or use actual quotes, every time we use a class word if we want to stress the differences left out. We need some way to alert others, too.

When I say *He's a "chef"* if I crook my fingers, I am telling you that he's a cook, but a special kind of cook. Our friend from India is famed for his curried chicken; another, from Germany, for his forty-eight-hour simmered soup. Our friend from India had better not serve us soup; our friend from Germany, curried chicken!

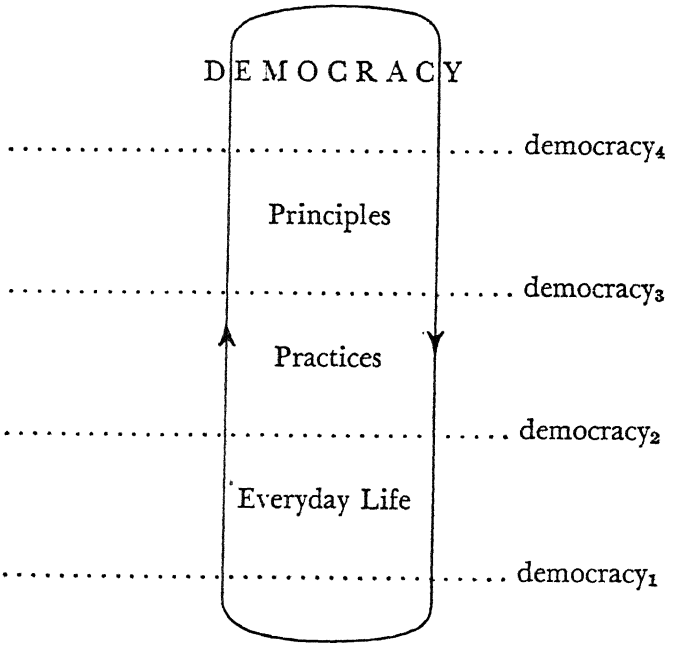
The crooked fingers—or the quotes—point to the differences left out.

3. And we'd better raise our arms high and crook our index fingers, or use quotes, every time we use a big word. This will be a signal to others that we know their responses to this word are not identical with ours, and that we must clarify meanings.

"Democracy" is one of our biggest words—and all of us use it. We need the big words to describe our complex society. We cannot get along without them. But "democracy," by itself, is a generalization of a very high order of abstraction.

Democracy, at the peak, is a word that sums up much of our way of life. On a lower level, the same word stands for our principles—our Constitution, our Bill of Rights, etc. On yet a lower level, we use the same word to stand for our practices in government, in industry, in education; our polling places, our supermarts, our cafeterias, our press conferences, our public schools, etc. And in our every-

day lives, we use the same word to describe the infinite number of things that go unnoticed because we are born to them. We have here, too, our contentions, our heartbreaks. Here is the exclusion of a child from a "public" school; here is the persecution of a famed scientist who is denied the right to live in a decent location because of the color of his skin; here is the "Restricted" sign, etc. These are the things we talk about. All of them have a place under the big word "democracy."



The semantic problem arises from the fact that I may use the big word "democracy" to mean one thing and you

another. Does it describe a perfect way of life? If so, then criticisms and suggestions for changes are heresy. Or, does it describe an ideal way of life toward which we strive but which can never be fully realized? If so, then "democracy" is subject to constant revision, to constant critical attention. And any suggestions for changes are always in order.

Korzybski tells us to put quotes around the big word to call attention to the need to go to lower order descriptions or silent level experience to clarify meanings of higher order abstractions. If we start with a big word—and stay there—others cannot know what we are talking about. The big words are big noises, Korzybski says, when we get too far away from firsthand experience.

The quotes say that the meaning of the big word is as personal as the life of any single individual in his cultural context.

4. We should use quotes to show incompleteness because the word is a separator.

If the psychologist had crooked his fingers when he used the word "mind," I would not have risen to the question: "Would you define the word 'mind,' as you use it, please?" He would not have been disturbed, and I would not have been thought hostile. The quotes would have alerted me to the fact that he was emphasizing the psychological but not forgetting the physiological aspect of the nervous system.

Use quotes to show that you are not forgetting that the word is a separator.

5. We should use quotes around a familiar word to indicate a special meaning. Here the quotes say *Watch me! I don't mean what you think I mean!*

Take a stroll up Madison Avenue from Fortieth to about Fifty-second. It is not much different from other avenues in Manhattan. But say, "Madison Avenue," with quotes and you conjure up the Great God Advertising, or to put it more discreetly, the socio-economic-political art-science of "Public Relations." Call it what you will, in one breath "Madison Avenue" epitomizes all the skills of promotion—of persuasion.

Just as "Rue de la Paix" symbolizes the wine-sipped-not-gulped joys of stylish French living, so "Madison Avenue" has come, in recent years, to symbolize the genius of American promotion.

Crook your fingers when you say "Madison Avenue" if you mean by that the quintessence of American seduction, of American cajolery, of American enticement, of American temptation in the interest of profit of one kind or another.

Use quotes to indicate to others that you use a familiar word with a special meaning.

To sum up then Korzybski's recommendations in connection with quotes:

Use quotes on the silent level to insure consciousness of abstracting inside your own skin.

Use quotes around a class word when you want to emphasize the differences left out.

Use quotes around a big word as a signal to clarify meanings.

Use quotes to show incompleteness because a word is a separator.

Use quotes around a familiar word to indicate a special meaning.

Etc.

28. *The* ETC. *to avoid* ALLNESS

If you will refer again to my pattern of the abstracting process, you will note that we *live* on what Korzybski calls the silent objective level of abstraction. This is the sensory level of firsthand experience within the world of people and things. From this, we move to the verbal level—to the descriptive level of abstraction. But the verbal world *is not* the actual world. And we can never reach the actual world by words alone. This, we must *experience* on what Korzybski refers to as the un-speakable level. Words can never bridge the gap between these two levels of abstraction.

The etc. is the signal to others that we know that our words cannot tell all:

(1) We cannot define a word in its totality
(2) We cannot describe a thing in its totality
(3) We cannot characterize a person in his totality

(1) We are inclined to say *Define your terms* as if a definition could circumscribe the meaning of a word absolutely. The student of General Semantics knows that we cannot define a word in its totality, no matter how many other words we use. There are two insurmountable obstacles:

The first obstacle is that we must use other words to define a word. Words cannot define another word in its totality because *every* word is an abstraction—a taking away from the whole. We know that every word is a class word that picks up only the similarities of the class to which we have assigned the object, and leaves out all of the differences. Regardless of the number of words I use to define another word, I can never get to those differences left out. For this reason, I use as many words as suit my

purpose, and, if it seems important to point to the differences left out, I add an etc. to my definition. This reminds me (and others, if necessary) that I have not told all.

But we have yet another obstacle. Our language is a closed system. We keep going round and round until we get right back where we started. When we use other words to define a word, eventually we must come back to the original word in order to define those other words! We are confronted with a collection of synonyms. Take a word like "loyalty," for instance. Do you know what "loyalty" means? The dictionary gives us the run-around. It gives us a grand tour from "loyalty" to "fidelity" to "faithfulness" to "constancy" to "allegiance" to "fealty"—and back again to "loyalty." Language is a circular system from which we cannot extricate ourselves by language alone.

As Korzybski points out, just as geometry rests on axioms that must be assumed as true, so the definition of any word rests on other words, other definitions, until, finally, we come to a meaning that must be assumed as known by direct wordless experience. Korzybski points out that we have to start with—or end with—undefined terms which are labels for direct experience. *Did you ever experience "loyalty"?* Then you know what I mean!

Just so, if the word we are trying to define stands for a *thing,* we come, at last, to the *pointing* stage. There is no other way. How, then, can we know what a word stands for—what it represents? The dictionary definition is a clue, but only the context in which the word is found can help us get closer to its meaning. Remember the word "chair"?

The poor devil goes to the electric chair tonight.

If I had my chair here, I could extract that tooth in short order.

He holds a professorial chair at Yale.
This kitchen chair is sturdy.
Be careful with that chair, it's an original Chippendale.
Etc.

We forget that even a familiar word makes itself at home in unusual places. Paul, our bellboy, for instance, on handing me a special delivery letter addressed, "Dr. Bess Sondel," said:

"I never knew you were a doctor. Say, last night our baby——"

"Not a medical doctor," I cut in fast, thinking to end the matter there.

"Quit kidding me," he countered. "You're no tooth jerker."

"No, Paul, just a Doctor of Philosophy," I mumbled, hoping to get to my letter.

"Of *what?*"

To which I could only answer: "Skip it, Paul, please. I'm busy."

"But it says *'doctor.'* What—"

For Paul, "doctor" means "doctor"—the kind that can cure a sick baby—regardless of the context.

The dictionary will be a clue, of course, but only the context can lead us toward a meaning.

When we use other words to define a word, the etc. reminds us that our definition of a word cannot approach allness.

(2) If our words cannot tell all, then our descriptions of things cannot tell all.

Let me try to describe my kitchen for you:

My kitchen is long enough to hold a twenty-four-inch square table, a three-burner electric stove with oven, and a sink equipped with storage space for silver, cooking

utensils, etc. This fills the length to an inch. The kitchen is wide enough to hold a refrigerator on the far end that also holds the twenty-four-inch built-in table. Above the refrigerator and the table-stove-sink are wooden cabinets for dishes, some staples, etc. But the elegant feature of this kitchen is the Venetian blind that I can ring down like a curtain. The kitchen is right off the entrance to the apartment (remodeled, I suppose, from some kind of closet). When the doorbell rings, down comes that blind. And, if you were to enter the apartment, you'd probably get the impression, as many have, that the light shining through comes from a convenient "powder room."

Well, there you have it. Think of the *et ceteras* I have left out! For every word I have used is a class word—table, three-burner stove, sink, silver, cooking utensils, etc.—that points only to the similarities of the class of objects described and leaves out all of the differences.

Certainly, I could have told you about my pots that hang under my wooden built-in table so that the bottoms (which are too much trouble to polish) don't show; I could have told you how one of my cabinet doors sticks on damp days; I could have told you about the leak in the pipe under the sink; I could have told you about my cracked cups, my assortment of leftover dinner plates, my convenient can opener, etc. But who doesn't have pots with unpolished bottoms, and who doesn't have a sticky door now and then, and who doesn't have a leaky pipe now and then, and who doesn't have a can opener[1958], *and how will these words tell you what's different in mine from yours?*

I can, of course, pile up the descriptive nouns and adjectives, etc., but how can my words tell all? In the first place, how can we get to the event level of my kitchen? This we can never reach, with or without instruments. If

your kitchen and mine were made from the same specifications—"identical"—the event level of your kitchen and my kitchen would be different—unique—in space-time. And secondly, how can my words tell all about what I can *know* about my kitchen? For every word is an abstraction that leaves out differences; for our language system is circular and rests ultimately on what is known by direct experience. Surely, we cannot, we should not, be misguided by allness, by that mistaken idea that we can tell all about anything in this existential world.

The etc. indicates that we do not subscribe to allness.

(3) If our descriptions of things cannot approach allness, we may be sure that our characterizations of persons cannot approach allness.

I heard a man with a know-it-all look say to a woman: "So you're a teacher, eh?"

"Certainly," she answered, with a Korzybskian glint in her eye, "and a wife and a mother and a grandmother and a cook and a golf addict and a cocktail hound and a student, etc., and God knows what I'll be tomorrow!"

We are so many things, and never twice the same. We do not truly know our selves. How can anyone pretend to a knowledge of the allness of another?

The characterization of a person cannot approach allness.

The etc. after the description of a human being is another semantic device that must have a place in the humanity of words.

The sophisticated student of General Semantics knows that every statement he makes is, in a sense, abridged. It cannot tell all. Every statement we make is abridged because our words are abstractions, because our language

system is circular, and, to come to the crux of the matter, because we just don't know all about anything! We select our words and we select our subject matter from a particular point of view. Whatever we say about anything is hemmed in by our individual limitations and by the limitations of the species Man. This is a simple lesson in General Semantics. Perhaps it will make us less positive, less dogmatic, and more willing to admit our limitations when we describe or appraise anything or anyone.

The etc. keeps our statements open-end. The etc. says *There's more to it than can be said.*

We cannot define a word in its totality.

We cannot describe a thing in its totality.

We cannot characterize a person in his totality.

Every statement we make is abridged.

29. What Korzybski's "LOGIC" IS NOT

Perhaps the first thing that should be said is that Korzybski was not concerned with formal logic. The quotes on the term "logic" will remind you of this fact as you read in this and the following Section.

The subtitle of *Science and Sanity* is *An Introduction to Non-aristotelian Systems and General Semantics.* It is essential to point out at once that Korzybski was not *anti*-Aristotelian. He proceeds from basic assumptions in *deductive* fashion to explicate General Semantics. He does not depreciate deductive procedures. It should also be noted, in this connection, that Korzybski's "Structural Differential" is a model of the abstracting process precisely in that he moves from one classificatory level to another. Korzybski does not, of course, deny the usefulness and the

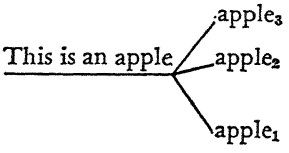
necessity for classification. Classification is one means of establishing order.

Korzybski evaluates the Three Laws of Thought (sometimes called Aristotelian) from his perspective which includes process, uniqueness, relatedness, and order.

1. The Law of Thought, called the Law of Identity, is formulated thus: A *is* A.

Korzybski would note only this: A is never twice the same. A is itself different at different moments in time. It is never identical with itself.

See what happens when we say *This is an* (undated) *apple.* The word "apple" is static. And the word "apple" coalesces (identifies—makes *exactly* the same) three different levels of abstraction. Like this:



$apple_3$ This is the word that *is not* the thing

$apple_2$ This is the silent objective level; as we see, as we touch, as we eat that apple

$apple_1$ This is the submicroscopic event level that will make of that apple as the days and the weeks pass a slimy pulp

So you see that the *word* stops process.

So you see that the *word* identifies three different levels of abstraction.

We forget the semantic implications of the "is" of identity when we say, for example *Myrtle is a neurotic.* We forget that Myrtle is never twice the same. We forget that there is something more to Myrtle than the *word* "neurotic" stands for. We forget, in other words, that the *word* "neurotic" is not the thing Myrtle—that it is a *label* which

we have put on her. Our language structure is such that we use the "is" of identity without an awareness of its fixating and limiting character.

2. Korzybski makes another point, this in connection with the Law of Contradiction: A is not not-A.

The order to which Korzybski subscribes is, in his language, "*multi-dimensional.*" This means that order is established in "multi" (many) "dimensions" (directions). If all things are process and all things are related, any one thing may conceivably be "A" to one set of related circumstances and not-A to another. Thus something may be both A and not-A.

When we "think" or talk about a person or a thing, we forget that we perceive and evaluate that person or thing from a unique perspective. We forget that everyone —everything—is part of a situation-as-a-whole which is, itself, only part of a broader situation-as-a-whole, etc. We see so little from a particular perspective and we are inclined to forget the *more.*

Jack, the grocer, for instance, looks at Mr. A and finds him a miser. Mr. A goes into the grocery and haggles over the price of vanilla wafers, *but,* of course, *only for the principle of the thing. Vanilla wafers are sold across the street for one cent less.* Jack the grocer will tell you that Mr. A *is* (*of identity*) a miser. But Mr. A's wife, who never goes near the grocery, incidentally, parades around in a mink stole and wears a diamond that would choke a horse. Mrs. A does not "think" Mr. A is a miser; for her, Mr. A *is* (*of identity*) a sugar daddy.

Any single thing is an atomic event in space-time with an infinity of relationships. Korzybski believes that the Law of Contradiction is inapplicable to a world of process, of uniqueness, of relatedness, and of multi-dimensional order.

3. Korzybski's third point refers to the Law of Excluded Middle (or Third): A is B or not B.

This law asserts that one thing either is or is not something—*with nothing in between.*

Korzybski calls attention to a semantic fallacy to which this law may lead. He recognizes the utility of the use of opposite terms in our everyday language. It is convenient, he says, to speak of day *or* night, land *or* water, life *or* death, etc. But, he says, issues are not usually so sharp. And, when they are not, it is more accurate to "think" and to speak in terms of degree.

We are inclined to speak of a person as *either* ambitious *or* lazy; as *either* beautiful *or* ugly; as *either* brilliant *or* stupid; as *either* neurotic *or* well-balanced. Korzybski calls this the antiquated *either-or orientation.* We should, instead, look about us at the world of people and things and see an infinity of gradations between one extreme and another. This, Korzybski calls the *infinite-valued orientation* which is appropriate to a process world in which nothing repeats itself exactly.

Watch the "is" of identity. It identifies the word and the thing. And it stops process.

Think of order as multi-dimensional. This expands the conception of any one thing.

Develop the infinite-valued orientation which emphasizes gradation in the world of people and things.

30. Korzybski's "LOGIC"

Korzybski's conception of multi-dimensional order emphasizes the relatedness of all things. Let us now consider the basic assumption of order in respect to Korzybski's "logic."

Korzybski makes two points that every user of words who wants to be understood will bear in mind.

1. A verbal "map" should be similar in structure to the "territory" it is intended to represent.

2. When two things (a verbal "map" and an actual "territory," for instance) have their structure in common, they have all their "logical" characteristics in common.

Ogden and Richards say very much the same thing, though the "territory" they discuss is limited to one area of experience. Ogden and Richards, as you will recall, say that when a reference (a thought symbolized in words) hangs together in the same way a referent (some*thing* in the outside world) hangs together, we have a true and logical statement.

Look at this map:

Without a single word, this map "represents" the actual territory. You recognize it. *Why?*

Not one of us has had a god's-eye view of the territory-

as-a-whole, to be sure. But most of us have had firsthand experience with some areas of the territory; and all of us with a particular area of the territory. For us, these lines—put together in a particular *arrangement*—represent the territory that is known to us as the United States. For us, the *structure* of the map is *like* that of the structure of the actual territory. The map hangs together in the way the actual territory hangs together.

So, also, with a verbal map. If the structure of the verbal map accurately represents the structure of what it is intended to stand for, we "recognize" it. We understand it. This means that if we can make verbal patterns that refer us to actual patterns in the world, people understand us. Part Five, which is concerned with a field theory of communication, will explain the method of making verbal patterns. But, for this, we must await, also, Morris's explication, in Part Four, of the uses of language which gives us the semantic apparatus necessary to the making of verbal patterns.

We are concerned now with Korzybski and what he has to offer. Korzybski makes two very important points:

1. A verbal map may give us an accurate description of something that exists. If a verbal map tells us that Denver is between Chicago and Los Angeles, the verbal map is correct. The elements and the relationship between the elements of the verbal map correspond with elements and relationship in the actual territory.[26]

2. A verbal map is as good as the predictability it provides. *How does it work?* An accurate verbal map of Route 41 from Chicago to Miami provides a high degree of pre-

[26] In the language of Ogden and Richards the verbal linkage matches the actual linkage; and, in this instance, the linkage—the "uniting relation"—is spatial.

dictability. It works very well. We can predict that if we stay on Route 41 we will reach Evansville. We can predict that with good luck we can reach Miami in about three and a half days. We can predict about when we will reach good stopping places and good eating places.

We should be able to predict, from an accurate verbal map, what is likely to occur in the relevant context. An accurate verbal map is, therefore, a logical map. For what is "logic" but an *If this, then that* hypothesis? *If we average thirty-five miles an hour . . . then we will reach Evansville at 7* P.M.

1. An accurate verbal map provides an accurate description of something that exists.

2. An accurate verbal map of what exists permits of predictability about what is likely to occur in the relevant context.

It should be noted that Korzybski's "logic" could be called a logic of probability in that it does not assume absolute predictability. Korzybski accepts the basic assumption of continuous transformation. "In the objective world," he says, " 'change' is ever present and is, perhaps, the most important structural characteristic of our experience." (page 284) But change without order would be complete chaos. Order—a certain relative permanence, a certain relative invariance of relations—makes possible whatever predictive powers we have. But prediction is, nevertheless, always probable and not absolute. For this reason, Korzybski introduces the principle of uncertainty into all of his assertive statements.

Korzybski's map-territory analogy has relevance to field theory of communication. So also has his insistence that the only link between the verbal world and the actual world is *structure*. Korzybski does not tell us how to make

the verbal pattern, but he does indicate its logical requi ments. And from this we shall move forward.

31. Korzybski's conception of the HUMAN BEING

As in everything else, Korzybski's conception of the hum being derives from the basic assumptions of proce uniqueness, relatedness, and order. We may sum up tl conception by his most inclusive hyphenated statement connection with the human being.

Every individual is a unique organism-as-a-whole-in-an-e vironment.

This statement may be divided into three parts:

1. Every individual is unique.

The uniqueness of the individual has long been accept as a matter of fact. One more point needs, however, to l made here to complete Korzybski's conception of uniqu ness. The individual is not only different from every oth human being in the world, he is also unique at every pa ing moment of his life. He is never twice *exactly* the sam And this, we shall find, has relevance to the field theory communication presented in Part Five.

2. Every individual is a unique organism-as-a-whole.

The whole organism is active in human behavior. there is one word that describes the organism-as-a-whol that word is "integration." The self acts and reacts as unit.

3. Every individual is a unique organism-as-a-whole-i an-environment.

When Korzybski makes this statement, he approach

Gardner Murphy's conception of the personality in a field. Here we are concerned with the relationship of the integrated (organized) self and the organized environment. Murphy calls this relationship "cross organization."[27] Murphy defines cross organization as a *crossing over* of the self and the environment in the organization or reorganization of a situation-as-a-whole. Korzybski's notion of invariance under transformation of the organism-as-a-whole-in-an-environment is similar. Invariance implies *order* —relations—a relative permanence; transformation implies change. The organism-as-a-whole-in-an-environment is a structured situation-as-a-whole—under transformation.

The term transformation implies structured change. *Trans* refers, as has already been indicated, to a "crossing over." Form means just what you think it means. You understand it at face value. It is a familiar word for the less familiar word "structure." Without knowing a thing about the details, you can recognize a home, a school, a church, a barn, a tree, a child by its essential form—by its structure. To transform something is to change its structure.

In a world of permanence and change, we may think of transformation as a crossing over of any one thing to other things to make or to remake form.

When the human being attempts to transform something in preferred design, words may be his greatest asset. Even children use this effective means by which to accomplish something new, something different. Even children will attempt to transform something that now exists into something they like better.

Pamie, for instance, looks out on a little lawn between

[27] Explicated in some detail in Part Five below.

her home and the one next door. Pamie wants a garden. Sitting on the porch with her grandfather, she begins to transform what now exists into something she prefers:

"Grandpa, do you like radishes?"

Yes, grandpa likes radishes.

"Grandpa, do you like green onions?"

Yes, grandpa likes green onions too, especially with steak.

"And tomatoes?"

But definitely, grandpa likes tomatoes.

"Why couldn't I have three rows right there, grandpa, for radishes, green onions, and tomatoes?"

Fine, grandpa agrees, but what about the rabbits?

"I'll put some wire around the garden!"

Grandpa says, Fine, but first, ask Miss Sh'Ann and see if it's all right to tear up the lawn.

Last week radishes, green onions, and tomatoes were beginning to sprout.

It is as natural as breathing to want something and to dream about how it can be had. Pamie saw those three rows of vegetables with a wire fence to protect them from the rabbits. To her, this was new form—something to be made, something different. And made it was. Pamie had never heard the big words *invariance under transformation,* yet she had counted on—predicted—the relatively invariant relation: *If seeds . . . then radishes, tomatoes, onions, etc.;* yet she had used, first words, then actions, to transform the lawn into a vegetable garden.

Korzybski's definition of the organism-as-a-whole-in-an-environment is similar in structure to that of Murphy's definition of the personality in a field. For both authors,

there is no separation between the organized self and the relevant organized environment. For both authors, the situation-as-a-whole is organized but changing. For both authors, there is, therefore, cross organization between the organized self and the relevant organized environment.

When Korzybski wrote *Science and Sanity*[1933], there was no word to describe this unique organism-as-a-whole-in-an-environment conception of human behavior. Korzybski coined the term *"semantic reactions"* to stand for what is today[1958] also described as transactional relatedness.

Korzybski states that high quality semantic reactions result from a proper evaluation of the life situation-as-a-whole. Proper evaluation is possible only when the human being looks out on the world of people and things with an awareness of process, of uniqueness, of relatedness, and of order. But, if he ignores these basic assumptions of science and the semantic devices appropriate to them, his semantic reactions will be similar to those of Rebel, the dog.

A whistle will bring Rebel on the run, even if he must upset the apple cart. Korzybski calls this a *signal reaction* which is normal for animals but *un*sane for man. The driver who responds to the green light by putting his foot on the gas, even though pedestrians are only halfway across the street, exhibits a signal reaction. This driver has made a trigger response to the signal without properly evaluating the situation-as-a-whole. (Even some dogs know better than this!)

When the human being is controlled by the immediate environment, without regard for the relevant situation-as-a-whole, his semantic reactions will be of low quality. If the human being identifies one member of a class with another, one level of abstraction with another, fails to take

account of difference, of unknown factors, etc.—if he will not *order* and thus *delay* his reactions long enough to appraise the situation-as-a-whole—his semantic reactions will be of low caliber. High quality semantic reactions result from controlled behavior in the situation-as-a-whole.

Every individual is a unique organism-as-a-whole-in-an-environment.

Everything is under transformation.

The communicator effects high quality transformation[28] by high quality semantic reactions.

32. Why SCIENCE AND SANITY?

Korzybski's *Science and Sanity* runs more than eight hundred pages. One student whose background in General Semantics was above the average, asked me whether or not *Science and Sanity* made a verbal pattern, and, if so, what kind of pattern. This question has merit, for, unless we understand the pattern, we cannot know what Korzybski is driving at and how he proposes to reach his goal.

Science and Sanity sets up a means to end (verbal) pattern. Korzybski is saying something like this: *If we will use "science" as the basis for semantic devices, etc., these semantic devices will be the* means *by which to move toward sanity—the desired* end. He proceeds, then, to indicate his basic assumptions (as derived from science[1933]); thence to his semantic devices, which, he believes, are the *means* by which to accomplish the hoped-for *end*—sanity for the individual and for society as a whole.

It must be conceded that the semantic devices which Korzybski brings together tend to introduce process,

[28] See exposition of cross organization in Sections 41 and 44 below.

uniqueness, relatedness, and order into the language system. And, since the language system and the nervous system are as one, it follows that if we misuse the language system, we abuse the nervous system. To put this positively, if the language system conforms with the nervous system, and if both—the neurolinguistic system—conform with the world in which we live, our behavior is likely to have a high degree of survival value. And this should, it seems, promote sanity.

Thus *Science and Sanity* looks to the future; "science" as means; "sanity," the end.

Again, I have used symbols. And I have used symbols to talk about other symbols—those to be found in *Science and Sanity*. Symbols about symbols are not so reliable as the original symbols from which they are abstracted, as Korzybski points out again and again. If you will go to *Science and Sanity,* you will find there many things I have been unable to touch in these brief pages. And you will, also, be able to appraise my interpretations of what Alfred Korzybski wrote.

PART FOUR

An Analysis of
Signs, Language and Behavior
and The Open Self

by

Charles Morris

"... a science of signs ..."

33. *The basic* TERMS *of Charles Morris*

The term "symbolism" is associated with the theories of Ogden and Richards. The term "General Semantics" is associated with the "science of man" of Alfred Korzybski. The term that is associated with the "science of signs" of Charles Morris is *"semiotic."*

In *Foundations of the Theory of Signs* (1938), Morris established his fundamental terminology; and, although he extended his terminology and expanded his theories in *Signs, Language and Behavior* (1946), he held to the key terms presented in *Foundations.*

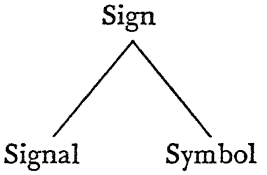
Morris defines the word "semiotic" succinctly and without amplification as the science of signs. But, before we examine the term "semiotic"—the highest order abstraction in Morris's science of signs—it will be necessary to dispose of the word "signs" itself.

A sign is a substitute for something else. The sign, therefore, requires interpretation. This is the essential definition of the word "sign."

If I look at a red tomato, this is a sign, for me, that the tomato is ripe. The doorbell rings; the siren screeches; the dog growls; I see black marks on a page; I hear the church bells chime; I look at the clouds; I see a raised eyebrow; a surreptitious glance at a wrist watch; the friendly look of a passing stranger. All these are signs which I shall

interpret in their context. We live in a world of signs. They press upon us from all sides—from the early morning alarm to the last tired yawn.

But there are signs of various kinds. For Morris, the word "sign" is a generic term. Like this:



A signal is a substitute stimulus; the doorbell for the visitor, the red light for *stop,* the gong for *come to dinner,* etc.

A symbol is a sign that is *produced by an interpreter* of a signal and acts as a substitute for that signal with which it is synonymous. If, when my companion takes a quick look at his wrist watch, I interpret this signal to mean *Get going!* I have produced a symbol. When I interpret the gong sound by the word "gong," (and the thought *It's time for dinner*) I have produced a symbol.

The symbol is, in other words, one step removed from the signal—which is, itself, a sign. Morris says that all signs that are not symbols are signals.

The word "sign" includes anything and everything in the sentient world that acts as a substitute for something else in goal-seeking behavior, and which must, therefore, be interpreted. The two terms "symbol" and "signal" make a place for every kind of sign, whether verbal or nonverbal.

The three major divisions of semiotic are syntactics, semantics, and pragmatics.

Syntactics deals with the way signs are put together to make "sign compounds"—phrases, sentences, ideas, and ideals. The word "grammar" fits into this context.

Semantics[29] deals with signs in two ways:

1. Semantics deals with what signs are intended to signify. The word "purpose" is appropriate here. This area of purpose is covered in Morris's account of the four *uses* of language.

2. Semantics deals, also, with the way, the manner in which signs signify. This area of semantics is covered in Morris's account of the four *modes* of signifying. For each use, there is a corresponding mode.

Pragmatics deals with the uses and the effects of signs in a behavior situation.

Syntactics, semantics, and pragmatics are the three major divisions of semiotic. But each one of these divisions, and, hence, semiotic as a whole, may be studied, again, on three different levels: pure, descriptive, and applied.

Pure semiotic establishes the language by which to investigate signs and sign behavior, thus to formulate a science of signs. When the terminology which explicates the four uses and the four corresponding modes is presented in this Part, the terminology will derive from Morris's work in the area of pure semiotic. The field theory of communication presented in Part Five is erected on this scientific base.

Descriptive semiotic studies actual signs. Such study rests, of course, upon the use of specialized terms established in the area of pure semiotic. When, for example,

[29] In *The Open Self,* Morris expands the scope of the term "semantics." Here he states (pp. 52-53) that he abandons the term "semiotic" to the specialists and embraces the term "semantics" for a "warmer" account of the science of signs.

we examine an editorial analytically and evaluatively, for the sake of the study of signs alone, we are in the area of descriptive semiotic.

Applied semiotic is the use of pure and descriptive semiotic in goal-seeking behavior. When a goal beckons—as a possible means of satisfaction of a need—we would exert our every skill toward the attainment of that goal. And Morris puts the intelligent use of signs at the peak of the human potential by which to achieve personal and social goals.

In this Part, we shall be interested in Morris's work in so far as it is concerned (1) with the study of the four uses of signs and the corresponding four modes of signifying, and (2) with the actual use to which signs may be put in self-making and man-making. If, tomorrow, you will make use of Morris's science of signs as you sit in conference with others, as you write a letter, as you telephone a client, you will have advanced to the area of semiotic which Morris refers to as applied pragmatics.

Semiotic is defined as the science of signs.

A sign is a substitute for something else, and, as such, must be interpreted.

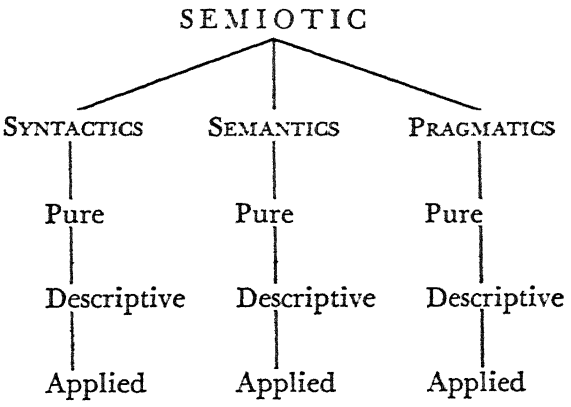
A signal is a substitute stimulus.

A symbol is a sign produced by an interpreter of a signal and acts as a substitute for that signal with which it is synonymous.

The three major divisions of semiotic are syntactics, semantics, and pragmatics.

The three divisions of each (and, hence, of semiotic as a whole) are pure, descriptive, and applied.

Here is a skeletal arrangement of Morris's basic terms which may help you to place them and to remember them:



34. Morris's science of signs a BEHAVIOR *theory*

The title, *Signs, Language and Behavior,* suggests at once that Morris will place the study of signs within the framework of human behavior.

All the terms used by Morris to explicate his science of signs refer to stimulus-objects in the environment, to organic dispositions, and to actual responses of the human being. Since this is so, Morris indicates that the science of signs is statable in terms drawn from the biological and even the physical sciences. Thus the science of signs "becomes a part of the empirical science of behavior."[30] As such it can utilize whatever principles and predictions the general theory of behavior has attained or can attain. Morris's theory of signs should, on these grounds, be consistent with the body of knowledge[1946].

One basic assumption of the biological sciences from which Morris moves forward is that the human being is goal-seeking—*purposive.* To live without preference for

[30] *Signs, Language and Behavior,* p. 19.

some goals rather than others would be to stop living, Morris says in *The Open Self.*

In *The Open Self,* in that warmer account of the science of signs, Morris sets up two specific goals—self-making and man-making—and indicates the sign techniques by which these goals may be approached.

35. The four USES *and the four* MODES *of signifying*

The four uses of language are *uses toward the accomplishment of goals,* and a goal becomes a goal precisely in that its attainment is anticipated as a possible satisfaction of a need. Only objectives consciously sought after may be termed goals. For this reason, it is necessary to consider our needs and goals briefly.

That we are needing, wanting, striving, purposive creatures all of us know. There are the deep-rooted physical needs that cannot be denied if we would live natural lives. There are the personal needs that are hardly definable but which all of us experience. There is the need for self-appreciation, for self-respect. How this is achieved is a matter of personal biography. Perhaps through study. Perhaps through work. Perhaps through service. But something must be done by the self for the self to satisfy this human need. Morris calls the movement toward the satisfaction of this need *"self-making."* And then there is the need for companionship, for friendship, for love, for admission into the community of men. Again, how this need is satisfied is a matter of personal biography. Certainly by feeling-thinking-doing *with others—for others.* And movement toward the satisfaction of this need Morris calls *"man-making."*

Only objectives consciously sought after may be termed goals. Self-making and man-making require specific objectives in the world of people and things.

The goals of men may be advanced by the intelligent use of signs. And Morris's informative, valuative, incitive, and systemic uses of language make room for every possible purpose.

Informative language provides for "thinking"; valuative language, for "feeling"; and incitive language, for action. Thinking-feeling-doing. That's all there is. There is no more. But Morris provides yet a fourth use. This use he calls "systemic." Systemic language is that language which is used *to organize the responses* of an interpreter, whether that interpreter is the user or the recipient of signs.[31]

When Morris speaks of the uses of language, he is concerned with the purpose to which the signs are put. He is concerned, in other words, with the *intention* of the user. Are the signs used to inform a recipient? If so, they are informative signs. Are the signs used to induce an attitude response? If so, they are valuative signs. Are the signs used to elicit a specific action response? If so, they are incitive signs. Are the signs used to organize the responses of a recipient? If so, they are systemic signs.

When Morris speaks of ways of signifying—of modes of signifying—he is concerned with *how to signify* in order to achieve the purpose of the user of words. If his purpose is to inform others, he will normally select designators as the appropriate signs. If his purpose is to induce an atti-

[31] The interpreter may be the person who produces the signs or someone else toward whom he directs the signs. Obviously, we may interpret signs which we produce. We talk to the self, as it were. The term which I use in this context to refer to someone else toward whom a user directs signs is "recipient."

tude response, he will generally select appraisors as the appropriate signs. If his purpose is to elicit a specific action response, he will for the most part select prescriptors as the appropriate signs. If his purpose is to organize the responses of a recipient, he must select formators as the appropriate signs.

The uses of language refer to the purpose of the user. The modes of signifying refer to the manner in which the purpose is best advanced.

It is necessary now to explain Morris's uses and modes of signs in more detail.

A. The INFORMATIVE USE *and the* DESIGNATIVE MODE

When I want to inform you concerning something about the past, the present, or the future, I ask only for an "uncomplicated" understanding response. To put this into the language of Morris, informative signs are used to cause an interpreter to respond to the signs as if the object, etc., signified has certain characteristics. That is all.

Here the purpose (if I interpret correctly) is precisely that of Ogden and Richards. And here the mode of accomplishment is, again, precisely that of Ogden and Richards. The user of words must select signs that designate (to use Morris's word) the object, event, idea, etc., signified. The terminology of Ogden and Richards is, of course, different, but the objective and the mode of accomplishment are the same.

Here is a sample of informative language as used by Norman Cousins in his editorial "Clean Bombs and Dirty Wars" which appeared in *The Saturday Review* of July 3, 1957:

> The "clean" bomb became headline news recently when three nuclear scientists, under the auspices of the Atomic Energy Commission called on the President. The news account of the meeting reported that the scientists asked for continuation of nuclear testing for five years. They said they needed that much more time to develop a "clean" hydrogen bomb; that is, a fission-free explosive . . .

These are informative signs if the purpose of Cousins is to provoke an uncomplicated understanding response—if Cousins wants his readers only to take cognizance of the contents of the news account.

Notice the language. Cousins chose designators which signify actual words of the news account. Notice, also, that the account is devoid of adjectives and adverbs. Notice that there is not one imperative. Designators signify objects, etc., impersonally and categorically. Thus grammar is an affiliate in this semantic enterprise. And a useful one.

The test of the adequacy of signs is in the response of the recipient. When the informative terms of the user become designators for the recipient, the signs are adequate. They have, in other words, fulfilled their purpose.

This criterion of adequacy concerns the *user* of signs. Such a criterion would, however, be risky for the recipient. The information may be erroneous—or false. The recipient must inquire further into the nature of his response.

The test of the truth of designative signs must be found in the object signified. When truth is so established, the designators are said to denote . . . I am remembering now my visit to the park. I approached a woman and asked *Where is the zoo?* She answered straight off and without a blink of the eye *Right down this path—about a quarter*

of a mile. I assembled three little girls and all the things they like to cart, from dolls to dogs, and started walking. When I came to the edge of the park, and no zoo, I realized that I had been subjected to a semantic hoax—designators that did not denote.

The insidious thing about this is that the signs *sound* like designators that denote. Notice the language: *Right down this path—about a quarter of a mile.* This is straightforward designative language. And that's the reason it works! When we listen and when we read, we forget that some designators denote—that others do not denote. Here is a criterion by which to evaluate statements that sound like propaganda.

Morris distinguishes, also, between the truth and the reliability of signs. A true sign—a designator that denotes—may not be a reliable sign! The reliability of a sign is proportionate to the frequency of denotation, as the little boy who cried "Wolf!" learned to his sorrow. When the newscaster says *Rain tomorrow* if we have listened to weather forecasts consistently we can make a quantitative judgment concerning the probable reliability of the signs. Liars who speak the truth are rarely believed. This is a quantitative judgment, and a wise one on semantic grounds. Again, this is a criterion by which to evaluate statements that sound like propaganda.

It need hardly be mentioned that signs which denote with consistency are the most reliable signs available. These are the signs which we find in our scientific works.

Morris makes another point about the reliability of informative signs in connection with the isolated sign. Again, this corroborates a statement made by Ogden and Richards.

The single designator "chair" is an ambiguous sign, Morris says. If we know only that a person "holds a chair," it is impossible to know whether he is grasping something he can sit on or has an academic appointment. Morris says that a sign becomes unambiguous when it *belongs to a sign-family* that has only one signification. This is saying, in more precise language, what has already been said. Only the context can provide the meaning.

The test of the adequacy of informative signs is in the response of the recipient. When the signs of the user become designators for the recipient, the signs are adequate.

Some designators denote. Others do not denote.

Those designators which denote are true. Those which do not denote are not true.

The reliability of the informative sign is proportionate to the frequency with which the designator denotes. Designators that denote consistently are the most reliable signs.

The unambiguity of a sign is established by its membership in a sign-family which has a single signification.

B. The VALUATIVE USE *and the* APPRAISIVE MODE

When the writer or the speaker uses signs with the primary purpose of provoking an attitude response in the recipient, he normally uses valuative language. As Morris puts it, the purpose of valuative language is to cause the recipient to accord "preferential status" to something.

How will the user of signs advance this purpose? He will select appraisors as the most appropriate mode of signifying. Appraisors of things, of people, of situations, of plans, etc., place a *value* on the thing signified. The appraisor may be negative or positive; high or low; for or against.[32]

[32] Work is now being done to "measure" appraisors. See Osgood, Suci, and Tannenbaum, *The Measurement of Meaning*.

Something may be appraised as "clean" or "dirty"; "moral" or "not moral"; "humane" or "fiendish"; etc. The user of such signs does so primarily to call out an attitude in the recipient, thus to prepare him for desired behavior.

Read, again, from Cousins, but this time to note the appraisors:

> Almost without realizing it, we are adopting the language of madmen. We talk of "clean" hydrogen bombs, as though we are dealing with the ultimate in moral refinement. We use fairyland words to describe a mechanism that in a split second can incinerate millions of human beings—not dummies or imitations but real people, exactly the kind that you see around your dinner table. What kind of monstrous imagination is it that can connect the word "clean" to a device that will put the match to man's cities? Yes; what is really meant by "clean" is that we may be able to build a bomb with a greatly reduced potential for causing radioactive fallout. But to call a hydrogen bomb or any bomb "clean" is to make an obscene farce of words.
>
> Or we will use the term "sunshine units" to measure the amounts of radiation suffered by people as the result of nuclear explosions . . . To use the pretty words of the nursery in connection with such an effect is to engage in a fiendish act of moral shrinkage.

Look, first, at the language. Notice the profusion of adjectives: "fairyland words," "monstrous imagination," "obscene farce," "fiendish act," "moral shrinkage," etc. Even the nouns and the verbs are colored by appraisive significance. This is the language of "madmen." Not normal human beings—but the insane! "Incinerate" is a sign that we are accustomed to associate with burning garbage; not with human beings such as sit around our dinner

tables! Here, again, grammar becomes an ally of semantic investigation.

Note, now, just what Cousins is doing in this passage. He is objecting violently to the use of the innocuous valuative sign "clean" to disguise hideous designators. He translates the valuative sign "clean" into informative language —"a bomb with reduced potential for causing radioactive fallout." But it is a hydrogen bomb which can incinerate millions of human beings! The favorably appraisive noun "sunshine units" he translates as strontium 90—a radioactive *poison* that gets into the nucleic acid and the bones with a risk of cancer.

Cousins uses the semantic device of translating appraisors into designators, *thus to support his appraisors.* And this is, of course, the device recommended by Morris.

The test of the adequacy of valuative signs is, again, in the response of the recipient. If we, Cousins' readers, respond to these appraisors in the way Cousins intends, then his signs have been adequate. They have fulfilled their purpose.

Valuative signs ask for an attitude response.

When valuative signs become appraisors for the recipient, the signs are adequate.

Designators that denote may be used in support of appraisors.

Semiotic is not a theory of value. But this is a behavioral science of signs. And the recipient of appraisive signs will desire some criteria of worth in relation to appraisors. These reside ultimately in the value system of the user of signs. Some clues as to the nature of the value system of

the user of signs are discoverable in Morris's incitive use of language.

C. *The* INCITIVE USE *and the* PRESCRIPTIVE MODE

We use words frequently to get a specific action response. Sometimes we are forthright and explicit. We then use frankly imperative signs such as *Come here! Stay there! Do this! Don't do that!* Such imperatives are clearly understood, for we have selected our signs for their prescriptive utility.

If the recipient responds actively as we desire, our signs become, for him, prescriptors. He does what we want him to do. Our signs are, therefore, adequate. They have served their purpose.

In giving instructions of any kind, the user of signs is careful to select prescriptors that are definite, precise, and clear. Incitive language has, therefore, its everyday utilitarian function.

But language is seldom "pure." And we rarely find a sharp division between the uses or the modes. I heard a medical man say to a worried patient: "Eric, why don't you go to the Swedish Club and hoist a few. It'll do you good. There's nothing in your reports that says *No.*" You may be sure that Eric, totally unschooled in semantic theory, responded to these signs as prescriptors, appraisors, and designators. Our medical man had woven his signs together carefully to achieve the desired response.

For most of us, life has a broad scope today. We read and we listen. And the signs we entertain are composites of informative, valuative, and incitive language.

It is relatively simple to find the designators. These are the signs that look outward toward objects, events, etc.

Nor is it difficult, with the help of grammar, to ferret out the appraisors. But it is difficult, at times, to find the incitive language. More often than not, the incitive content is more implicit than explicit. And sometimes it is totally omitted. *But people use signs because they want something.* The purpose is there, whether the user is conscious of it or not; whether he states it or not.

It is important to know what the user of signs wants. Why does he write? Why does he speak? The answer to this question is, probably, our only clue to his value system. Let me quote again from Cousins:

> And it is precisely the boiling and churning of the unpredictables that make it necessary today to bring the weapons of mass destruction under control, to define new relationships among the nations, and to make these new relationships work under enforceable law.

This is explicitly incitive language. Cousins chose prescriptors, thus to elicit a specific action response:

1. Bring the weapons of mass destruction under control!
2. Define new relationships among the nations!
3. Make these new relationships work under enforceable law!

Here we have the imperatives of explicitly incitive language. *But who is expected to respond by specific action?* Are these prescriptors merely rhetorical—directed to the four winds? No, here it is:

> For the President has previously stated that any ban on nuclear testing must be tied to a ban on nuclear armaments. If, therefore, we now insist on continued testing, it can only mean that disarmament itself is doomed.

This incitive language is directed to the President of the United States. The readers of *The Saturday Review* are

intelligent citizens of the United States. All the readers of *The Saturday Review* by indirection address these incitive signs to the President of the United States.

Cousins tells us what he wants. He is concerned for the welfare of all men. He is concerned for relatedness between nations, between all the peoples of all the world, and this he would secure—protect—by law.

Relatedness—and the dignity and security of all men!

Do these values fit into what is known[1958]? The answer to this is the criterion by which to judge appraisive and incitive language.

But, you will tell me, and rightly, that Khrushchev used virtually the same appraisive language as Cousins in a speech he made in Prague. Here are his words, as quoted in *The Chicago Tribune* on July 13, 1957:

> How can you have a clean bomb to do a dirty thing? It means the destruction of women and children. What a contradiction! They call dirty things clean.

How can we appraise the words of a Cousins, let us say, as against those of a Khrushchev? The facts may in both cases be similar; the designators denote. The moral judgment as expressed in words may in both cases be similar. How, then, are we to determine which we shall follow, which we shall support? We must, of course, make a quantitative judgment concerning the reliability of the signs as based on frequency of denotation. But we should supplement this by an investigation of the incitive use of signs—expressed, implied, or even omitted. For here is purpose—and the system of beliefs is the reservoir from which purpose springs.

What does Cousins want? Why does he write? Cousins

tells us. *What does Khrushchev want? Why does he speak?* Khrushchev does not tell us. Our experience with Khrushchev leaves little doubt as to the purpose of this speech in that Communist satellite capital. Obviously, we cannot neglect the context as a whole, and the context as a whole is the whole man—not only what he *says* but what he *does*.

The purpose of incitive signs is to provoke a specific action response.

When the signs become prescriptors to a recipient, the incitive signs are adequate.

Incitive language is the clue to the value system of the user, for it reveals his goals. But it is only a clue. Ultimately, we must place the words in the context of the human being.

D. The SYSTEMIC USE *and the* FORMATIVE MODE

The signs that impinge upon us are many and varied. We must make order of these signs. Morris presents a method by which to organize signs and thus provide for the organization of the responses of recipients of signs. This method initiates a terminology of form that is appropriate to a science of signs.

Systemic language organizes. This is its only function. It does not otherwise add to the effectiveness of signs. It merely systematizes the other uses—informative, valuative, and incitive. This is the way Morris puts it:

> The systemic use of signs is the use of signs to systematize (organize) behavior which other signs tend to provoke.[33]

Notice that the term "systemic" applies to use—to the intention of the user. How will the user signify this inten-

[33] *Signs, Language and Behavior*, p. 104.

tion? The mode of signification—the way he signifies—is through the use of formators.

The term "formator" deserves attention. It signifies something whose function it is *to make form.* To make form is to establish a *pattern* in which the arrangement—the relatedness—of the separate elements is of primary significance rather than the intrinsic nature of the separate elements. Let me quote here, again, the statement by Wiener:

> A pattern is essentially an arrangement. It is characterized by the order of the elements of which it is made, rather than by the intrinsic nature of these elements.[34]

To say, then, that the user of signs establishes order by the use of formators does not mean that he introduces new content of any kind. Formators simply make it possible to establish the arrangement of many separate signs. Say that you want to bring before your community the fact that chain stores are displacing independent stores with the result that capital comes from other localities and profits revert, therefore, to those localities. But, you want to point out, also, that the chain stores do bring the consumers of your community advantages both in merchandise and in price. You would, of course, have your facts and your figures and the specific examples that would support your statements. All these separate signs can be organized under these formators: *The disadvantages and the advantages of chain stores.* And, if the recipient will respond not to the intrinsic nature of the separate signs but to the *arrangement*—the form—of the entire sign complex, the formators are adequate. The recipient will know just what you are talking about—*The disadvantages and the advantages*

[34] *Human Use of Human Beings,* p. 3.

of chain stores. And every statement you can possibly make about this subject will find a place under these formators.

The arrangement of the formators *The disadvantages and the advantages of chain stores* could be signified as S_1 *and* S_2.

There is another arrangement of formators that is signified by Morris as S_1 *or* S_2. Books may be written with this arrangement of formators as the basis for order. Let's take two of the various hypotheses concerning the origin of the solar system and use Morris's formal arrangement S_1 *or* S_2 as the basis of verbal formators:

The nebular theory or the planetesimal theory

Everything that can be said about these two hypotheses will find a place under these formators. These two theories *must* be kept entirely separate. If one of the two theories is accepted, the other cannot be accepted. If one denotes, the other cannot denote. Part One of the book may, therefore, be given over entirely to the nebular theory; Part Two, to the planetesimal theory. *The formators establish the arrangement.* And if the signs do, indeed, become formators (creators of form) to the recipient, he will know that one *or* the other theory may be true, *but not both.*[35]

It is important to point out, as Morris does, that formative signs may be in the informative use, the valuative use, and/or the incitive use.

In the example given above, the formators are in the informative use and the mode of signifying is designative. But, if the user of signs desires to elicit an attitude response, he would set up his formators in this way: *Merits of the nebular theory or merits of the planetesimal theory.* In

[35] We shall pursue these and other arrangements of formators in detail in Section 43 below.

this case, the formators are valuative in use and the mode of signifying is appraisive. Or, the user of signs may say: *Choose the nebular theory or choose the planetesimal theory.* These formators are in the incitive use and the mode of signifying is prescriptive.

Formators, therefore, serve two functions:
(1) Formators organize *what* is said
(2) Formators organize *why* it is said

That formators systematize subject matter—content—is readily seen. But that formators also systematize purpose is not so quickly recognized. Formators epitomize vast quantities of words, but, since formators organize signs in the designative, appraisive, and/or prescriptive mode of signifying, they are also a clue to purpose. When the formators involve signs in the designative mode of signifying, the recipient may assume that the purpose of the user of signs is to inform. When the formators involve signs in the appraisive mode of signifying, the recipient may assume that the purpose of the user of signs is to induce a preferential attitude response. When the formators involve signs in the prescriptive mode of signifying, the recipient may assume that the purpose of the user of signs is to achieve a specific action response.

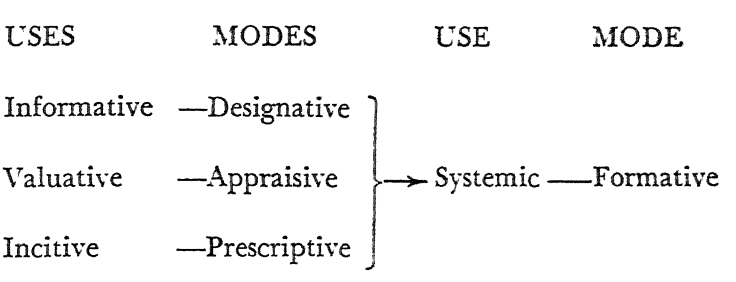
Formators may, of course, be a combination of all uses and modes of signifying. Like this:

> *Exposition of nebular and planetesimal theories; evaluation of theories; and suggestion for choice*

Here the purpose is threefold: to inform, to elicit a preferential attitude response, and to incite. And the modes of signifying are designative, appraisive, and prescriptive.

We must remember that language is goal-seeking and

that the science of signs of Morris is a behavior theory. The three uses of language—informative, valuative, and incitive—provide for thinking, feeling, and doing. And systemic language is the means by which to organize these various signs, thus to organize the responses of interpreters. Like this:



I hope I have not given you the impression that signs are "pure" designative, "pure" appraisive, or "pure" prescriptive. They are not, of course, as Morris points out. We use signs, sometimes, hardly knowing what we want. And, as for the responses of a recipient, how can we know the effect that our signs will have upon him, exactly? We cannot know, of course. I am remembering now the mountain drive up a canyon road outside of Colorado Springs. Shuddering, I said to my companion at the wheel: "This road is icy." What was my intention? Were these informative signs? Did I want my companion to take cognizance of the characteristics of the frozen water under the wheels of the car? Or, did I want him to experience something of my apprehension (thus to prepare him for desired behavior)? Or, was I being implicitly incitive? Did I want him to stop and put chains on the tires, or find a possible spot to turn around and go down? I hardly knew. The words came. And when he said: "Nuts!" what was he

designating or appraising? The road? Me? We never know —for sure.

Secretary of Defense Wilson was probably surprised at the intense appraisive response to his now famous "bird dog" remark. In 1954, when the draft quota was lowered, a good many men were looking for work. Wilson was asked if there was a possibility of placing defense contracts in the distressed areas. He replied that he had a lot of sympathy for people who were caught up in change, but, he said: "I've always liked bird dogs better than kennel-fed dogs—that will get out and hunt for food instead of sitting on their fannies and yelling."

What was Wilson's *intention* when he used these signs? Here are the possibilities:

The words may have been informative in that he was reporting his preference for bird dogs rather than kennel-fed dogs. But in this context, this seems unlikely.

The words may have been valuative in that he was appraising bird dogs and kennel-fed dogs, and, by analogy, the workers who were out of jobs. And, in this context, this interpretation does not seem unlikely.

But, these words may have been used incitively to suggest that the men go out and look for jobs. And this, too, in this context, does not seem unlikely.

The interpreters of these remarks, the men who were out of work, considered these signs appraisors *of themselves,* sitting *like* dogs on their fannies and yelling. They saw red!

Wilson probably spoke without intending to give offense, and yet his words caused the whole country to resound with indignation and resentment . . . As users of signs, we can never be sure just how a recipient will respond.

It is important to note, too, that we select designators

frequently as the most appropriate signs by which to elicit an appraisive or even a prescriptive response. This is habit with the scientist. And it is coming to be habit with the well-trained salesman.

Only systemic language of the type of logic and mathematics is "pure." We select formators, then, *only to establish order.* We are not otherwise concerned with the signs which are systematized.

36. The MISUSES *of language: The pitfall of* PERFECT COMMUNICATION

The myth of perfect communication traps all of us now and then. We assume that the same word signifies the same thing to everyone. We fail to remember that communication is a matter of degree.

Some think that education is at fault and that each word should be assigned one meaning, identical for all. Others think that we should abandon the big words and confine our use of signs to designators in the immediate environment. These antidotes are impossible of achievement, and perhaps even undesirable in our present state of civilization, as Morris indicates.

The hazard of approximate communication has been discussed before. As Ogden and Richards point out, the meaning of a symbol lies always partly in the psychological context of the user. This we know is a natural consequence of the uniqueness of the self.

The antidote prescribed by Ogden and Richards is to refer symbols outward to things, etc., thus to stabilize the communication process. For the differences are not in the thing symbolized; the differences are in the experiences of the users of symbols.

For Korzybski, the antidote to the natural hazard of imperfect communication is consciousness of abstracting. This, Korzybski says, alerts users to the fact that every word is an abstraction. This alerts users to the fact that language is a closed system which rests, ultimately, on meanings that must be assumed as known by direct experience and which cannot be perfectly described by words. Consciousness of abstracting alerts users, therefore, to the inescapable fact that communication is always approximate, and never complete.

What does Morris say?

The antidotes of Morris are found in the uses and modes of language.

Every sign has a core of meaning, Morris says. Unless this were so, the sign would not signify and would be useless as part of the language system. But, for every user, the fringe meaning is different. This is especially so in the big words that refer to highly complex life situations. What can we do with such words as "civil rights," "security," "labor," "equality," "freedom," "mercy," etc.? How can we find and communicate the core of meaning?

What has been said before is said again in the language of Morris. Where there are designators, and preferably designators that denote, state them. Civil rights concern human beings. *What human beings? Where are they? What is happening to them? And what are they doing?* The answers to these questions may be put into designative signs. But what about such a sign as "mercy"? What can we do with this valuative term? Is there not an *act* of mercy—actual, possible, or even plausible? Morris says, concretize the values. Give *examples* of acts of mercy that

have happened or that may happen. And this procedure reverts again to designators.

What Morris is saying here is precisely what Korzybski says when he recommends that high level abstractions be referred to the descriptive level of words that is closest to the un-speakable level of objective experience.

Find designators—and preferably designators that denote—to concretize the big words.

37. The MISUSES *of language: The pitfall of* OVER-GENERALIZATION

To generalize is to say something that applies more than once. And it is too easy—too seductive, Morris says—to move from "this" to "some" to "most" to "all." The reason for this is that we over-generalize to strengthen an argument. If we want to enlist high-school graduates into the nursing profession, it weakens the persuasion to say anything less than that "all" nurses make a comfortable living and that "all" nurses have their pick of wealthy patients or poor but handsome interns. "Some" is much less imposing; "a few" hardly an argument at all. So it is quite natural to use over-generalization to make a point.

Again, we find Morris's antidote in the uses and modes of language. And again, it seems that his very terminology is suggestive and helpful.

It is difficult to make a generalization that is all-inclusive on the informative level. Try it yourself and see. What can you say about *all* men? All men are male humans within a certain age group. That will pass. But what else can we say? All men are mortal? Yes, this is a sound generaliza-

tion. The cemeteries are full of designators that denote. What else can we say about *all* men? They are born, they live, they die. All of them breathe air and consume food. All of them are "featherless bipeds." Already, we begin to wonder if there is anything else we can say about *all* men. Let's sum it up: All men are men.

It is much easier to find designators for *some*. And much easier to find designators for *a few*.

A generalization should stop where the designators that denote stop. It is helpful to quantify terms that generalize, when possible.

Difficult though it is to make *all* generalizations properly supported by designators, few of us hesitate to make sweeping generalizations on the valuative level. This is safe because everyone knows that valuative terms do not have designators. So we say, protecting ourselves by the omission of that compromising word "all," *So-and-sos are so-and-so.*

"So-and-so" is a valuative term. If Jews are "rich," and if Catholics are "narrow-minded," and if labor is "power-hungry," and if liberals are "leftish," and if Negroes are "lazy," and if blondes are "loose," and if women are "gabbers," we do not need designators—and *I'm entitled to my opinion and you're entitled to yours.*

Can we dignify sweeping valuative generalizations by calling them opinions? An opinion is a leap of the mind from available facts precisely because all the facts cannot be in. A leap of the mind *away* from available designators cannot properly be called an opinion.

The antidote to over-generalization in valuative statements is the signification of relevant designators.

To say this differently, the generalization should make clear the qualifications under which the generalization holds.

38. The MISUSES *of language: The pitfall of* GULLIBILITY

The pitfall of gullibility is deep. We are not only gullible before the signs of others, we are gullible-plus, as Morris puts it, before our own signs. Here we jump into the deep pit—eyes closed.

We protect the self, even if we must delude the self to do it. We talk ourselves out of our uneasiness, out of our ineptness, out of our blunders; out of our fears, out of our frustrations, out of our tensions, our unhappiness, our failures. We do this with coercive signs. It is the rare one who can resist the seduction of his own flattering, soothing, felicitous signs. For this is the formula, it seems, for living with the inadequate self.

The antidotes to gullibility before the signs we use to protect the self are the antidotes we use to protect ourselves before the signs of others.

The first requisite is to establish the proper relationship between the uses of signs. It seems obvious to state that prescriptors should find their justification in worthy appraisors which rest, in turn, upon designators that denote.

First, designators
Then, appraisors
And only then, prescriptors

This is the antidote of Morris. Gullibility results from our failure to note that appraisors and prescriptors are used to persuade—first toward an attitude response, and then toward a specific action response. The semantic necessity

here is to differentiate between persuasion and information. And this is accomplished by attention to the uses and the modes of language.

Grammar is one means by which the distinction can be made. Designators that denote signify things, etc. Here we find nouns and verbs that are unburdened by the attitude of the user of signs. Appraisors are ferreted out by attention to adjectives, to adverbs, and to appraisive nouns and verbs.

Gullibility occurs, also, when we do not use semantic criteria by which to distinguish between facts and opinions. The convention that is generally accepted is that a statement which is verifiable by impersonal means may be considered a fact, at a date. And anything less than this must be called either a false statement or an opinion.

What, then, are the criteria by which to distinguish between facts, false statements, and opinions?

The criteria are semantic and are to be found in Morris's science of signs. Designators that denote are statements of fact, at a date. They are true. Designators that do not denote are *false*. Appraisors are always personal to a degree. Since this is so, they belong in the classification of opinion.

I am recalling now a test that I gave to thirty top-ranking executives of an international industrial organization. The purpose of the test was to determine whether or not these men could make the distinction between facts and opinions. The average grade was 35—seven correct out of twenty questions. And yet Jill, then ten, made a grade of 95. She apologized for her failure to make 100 by saying she did not know the meaning of the word "prestige" and could not, therefore, answer correctly.

Any child who understands elementary-school grammar can make the distinction between facts and opinions. This is something I heard on Sh'Ann's porch:

WENDY (*age 8*). Let's play "Facts and Opinions"!

SH'ANN. Joan, you start. You say something and the rest of the children will decide whether it is a fact or an opinion.

JOAN. Yesterday I lost five dollars, and that was an awful lot of money to lose.

JILL. But you are saying two things, Joan. Start with one and then we'll go to the other.

JOAN. All right. Yesterday I lost five dollars.

BOBBY (*age 7*). That's a fact.

SH'ANN. How do you know, Bobby? Were you there?

BOBBY. No. But I believe Joanie.

SH'ANN. Why?

BOBBY. Because. Because she always tells the truth. I believe her.

SH'ANN. Her words are reliable, then, aren't they?

BOBBY. That's right. They're reliable. I believe her.

JILL. Now the other part, Joan. What did you say?

JOAN. That was an awful lot of money to lose. And that's a fact.

SH'ANN. Why is that a fact, Joan?

JOAN. Because my mother almost cried.

SH'ANN. What did your daddy say when he came home?

JOAN. He laughed, and he asked my mother if she remembered when he lost his shirt. And then my mother laughed too.

SH'ANN. Your mother felt that five dollars was an awful lot of money to lose, but your daddy didn't. Is that the way it was?

JOAN. Yes, which one was right?

SH'ANN. Joan, let me explain something. Some people would consider five dollars an awful lot of money and others would not. The words "an awful lot" mean different things to different people. Because this is so, these are opinion words—not the same for everybody. And we do not use the words "right" and "wrong" about opinions. When do we use the words "right" and "wrong"?

PAMIE. Only for sentences that sound like facts. Some of them are right and some of them are wrong.

SH'ANN. Yes, some of those sentences are true and some of them are false. How can we know the true from the false, Pamie?

PAMIE. We look it up. Or we show it.

SH'ANN. That's fine. I'll just ask one more question. And this is very important. Some people think that because we can't prove opinions—and because we can't call them right or wrong—that an opinion isn't as good as a fact. How do you feel about this?

(This puzzles the children, but Jill, who is the eldest, answers.)

JILL. We can only have an *opinion* about people and what they do. People are more important than things.

SH'ANN. That's good, Jill. And when you say, "People are more important than things," what is that—a fact or an opinion?

JILL. It's an opinion. That word "important"—that's an adjective.

SH'ANN. Yes, a predicate adjective. Good girl.

The older children make their distinctions entirely on the basis of grammar. In this way they differentiate be-

tween designators and appraisors, and they do it quick as a flash.

Adults should treat statements that sound like facts differently from the way they treat appraisive statements. And yet they fail, for one reason or another, to make the distinction. Here are two statements that were part of the test given to the executives:

> Last year the records show a loss of $20,000 on the Alaska project.
>
> That was a lot of money to lose.

Everyone called the first statement a fact. (These are designators, of course, and if they denote, the statement is a fact. And in the test, it was assumed that the designators denoted.)

But only four of the thirty called the second statement an opinion!

A designative statement is the cue to find the denotatum; an appraisive statement is the cue to find supportive evidence in designators that denote.

We are gullible before the signs of others when we fail to establish the relationship of the uses of language: *first,* designators; *then,* appraisors; *and only then,* prescriptors.

We are gullible before the signs of others when we fail to distinguish between facts, false statements, and opinions. Designators that denote are facts, at a date; designators that do not denote are false statements. Appraisors are always personal and are, therefore, opinions. An opinion is neither true nor false, neither right nor wrong. An opinion is better or worse depending on the evidence that supports it; and evidence must be discovered in designators that denote.

Grammar can help us make the distinctions.

39. The END *toward which men strive:* SELF-MAKING *and* MAN-MAKING

All four uses of language are essential to the enterprise of self-making and man-making:

1. The INFORMATIVE use

The history of civilization is there for us to discover. And life is renewed every day of our lives—here for us to discover.

If it is true, as Northrop suggests, that our values spring from what we know; and, if it is true, that in so far as our values are consistent with the body of knowledge the values are true, then it becomes the moral obligation of man to exert his human potential in the discovery of his world. The informative use of signs is the firm ground upon which to erect other signs.

2. The VALUATIVE use

The valuative use of language has its roots in the value system of the human being. The value system is, as Murphy and others point out, the most durable, the most unshakable, the most stable aspect of the personality as a whole.

Valuative terms are expressive of this deep innermost resource of man. For how we will entertain facts which are designated is determined by the system of beliefs. A fact is as nothing until it touches a man's life. And when it touches the lives of all men, the appraisors proclaim its power—destructive and constructive.

3. The INCITIVE use

Incitive signs are the spur to all action, within the self and outside the self. We must *will* to do something, if we

would do it. And willing means that we listen to our own prescriptors.

Incitive signs are directive signs for others as well as for ourselves:

Bring the weapons of mass destruction under control!

Define new relationships among the nations!

Make these new relationships work under enforceable law!

Men must do these things, if mankind will survive. Incitive signs must lead the way.

We cannot neglect our incitive signs.

4. The SYSTEMIC use

The language of order is essential to the organization of the self as a self. Here we have a composite of information and beliefs—a fusion of ideas and ideals. Unless the human being has a conscious awareness of the nature of the organization of his inner experience, he has no way of "getting at" himself. He has no way of appraising his behavior. Self-understanding is an understanding of the organization of the self. *How do I hang together?* The answer to this question would seem to be a first approach to the question *What am I?*

Unless we use systemic language intelligently, we have no way of finding order, or disorder, in the world in which we live. When we recognize order, we use formators.

But most important of all, the systemic use of language makes it possible for man to *cross over*—as one aspect of the field in which he exists—and to exert his human potential to make form and to remake form in the interest of himself and others.

Cross organization between the self and the relevant environment is possible only as we know order. And cross

organization is the means by which we enter into the life situation-as-a-whole with an awareness of the relatedness of one self to other selves, of one nation to other nations, of all the peoples of all the world. Only cross organization can effect this. This means that signs may be put to use in the highest goal of mankind. For to establish togetherness between men of diverse heritage would be to attain the full humanity of words.

The science of signs of Charles Morris will help man to fulfill himself.

But self-making and man-making is a circular process. Man makes institutions that far outlast him. And these institutions fashion the making of men. The science of signs of Charles Morris will help man in this circular enterprise of man-making through self-making.

PART FIVE

A Field Theory of Communication

40. Introductory

Everything in the preceding pages is introductory to Part Five. The basic assumptions of field theory of communication derive from the physical and biological sciences. *The Meaning of Meaning* and *Science and Sanity* anticipate, *The Open Self* and *Signs, Language and Behavior* facilitate field theory of communication.

You will find the thesis of this book in Part Five. And you will find that the book's verbal pattern falls into the form of a means to end hypothesis. The *Primer of Semantics* moves toward the goal of the humanity of words.

As you read the following Sections, you should find the answers to these questions:

Why should we have a field theory of communication?

How is field theory of communication different from other theories?

How can field theory of communication help us in the accomplishment of our purposes in our everyday lives?

As was indicated in Part One, the term "communication" has broader significance than the area covered in this book. We have delimited its scope by confining our interest to verbal and nonverbal communication in goal-seeking behavior. We have been concerned with reading, with writing, with speaking, and with listening. And we are

concerned now, most especially, with thinking—upon which everything else rests.

41. The PERSONALITY *in a field*

The human being may be studied with profit on three levels of complexity, as Gardner Murphy points out:

(1) As a physical object

(2) As a unified self inside the skin

(3) As a unified self in cross organization with the environment

All three levels have significance for field theory of communication, but it is the third and highest level of complexity which has particular relevance to the communication process[1958].

(1) The human being as a physical object

Statistical facts in connection with the human being as a physical object are, of course, important. His age, his height, his weight, his "race," etc., are relevant here. How the communicator presents himself—as an object—makes a difference. The president of one of the largest industrial organizations in America made this statement from a public platform: "When a man opens the door and enters my office, something happens between us that is hard to undo." There are many indeterminants that enter into the impact of one individual upon others. The physical self is highly expressive of the unique personality as a whole—and this on the nonverbal level. Field theory of communication places great emphasis on the expressiveness of and receptivity to nonverbal signs. Indeed, this is one of the characteristics of field theory.

Neither the communicator nor the recipient should neglect himself as an object. The silent self communicates.

(2) The human being as a unified self inside the skin

This second level of complexity concerns the self as an organized whole. The personal biography of the individual is involved here. This is not the place to attempt to explore the psychology that deals with the integration and the conflicts within the self. Nor is it necessary to dwell at this point on the stuff of organization. Is it needs? Is it interests? Is it knowledge? Is it values? Is it all of these? Whatever it is, the system is *hierarchical*—there is an organization in which the dominant forces take precedence over the less dominant forces.

The eminent biologist Edmund W. Sinnott, Dean of the Graduate School of Yale University, says that "organized development is concerned not so much with *substances* as with specific *relations*." With this in mind, Sinnott says, "biologists have postulated the existences and effectiveness of 'fields' of various sorts, particularly bioelectric ones."[36] Sinnott concludes by pointing out that every organism is purposive, and that at its highest level this "regulatory protoplasmic control" is called "conscious desire or purpose." (page 462)

This is a new look at the inner self and one that the biologist Sinnott shares with the psychologist Gordon W. Allport of Harvard. Allport speaks of the self as a structural system—self-regulating and self-maintaining. "Intentional characteristics," Allport states, "represent above all else the individual's primary modes of addressing himself

[36] Edmund W. Sinnott, "The Biology of Purpose," in *Selected Papers on Psychotherapy, Purpose and Communication;* reprinted from the *American Journal of Orthopsychiatry,* XXII, Nos. 3 and 4 (July and October 1952), 460.

to the future."[37] Allport relegates the reduction of tensions that derive from the past, or even a present situation, to a secondary position. Purposive striving, he says, has a future reference that accepts risk-taking and scorns the avoidance of tensions. It is as if the inner self were bent upon the completion of an unfinished, and never to be finished, structure. This is a psychology of becoming, as expounded in a work of the same name by Allport.

When we use techniques of communication to advance purpose on the conscious level, this contributes to the inner organization of the self. And, with increased organization, the self is better equipped to make intelligent use of communication techniques. The process is circular.

(3) The human being as a unified self in cross organization with the environment.

To speak of the cross organization of the self and the relevant environment is to speak of field theory of personality. In Parts One and Three of this book, I referred to Gardner Murphy's conception of the personality in a field. If we would crystallize this conception of personality, no one single word is likely to be adequate, but as Murphy says, the word "field" will perhaps serve, if we expressly state that it is used as it is in physics. "An electromagnetic field," you will recall, "permits of no strict demarcation of a boundary and may change continually as a result of varying currents." (page 5) Murphy defines the personality in a field as an electromagnetic process in which the organismic pole and the environment pole flow into one another. It is important for the communicator to remember that

[37] *Becoming*, p. 89.

Murphy states that the boundary between self and world "is often vague or non-existent." (page 5)

Murphy's conception of the self in cross organization with the environment is basic to a field theory of communication. We have accepted the assumption that the human being is an organized whole—a composite of integrations and conflicts—in the process of continuous reorganization. We accept, also, the assumption of order, and disorder, in the environment.

Environment is one of the big words. *World* defines "environment" as "all the conditions, circumstances, and influences surrounding and affecting the development of an organism or a group of organisms." This definition suits our purpose exactly. The environment pole is part of the field as a whole and is, therefore, part of the communication process. That aspect of the environment that is pertinent to a communicators' goal-seeking behavior is relatively narrow, but narrow though it is, the individual is aware of only a part of it. He can perceive consciously only that portion of the environment which his nervous system is "willing" and able to entertain at any moment in time.

The chief problem which faces any intelligent human being is that of discovering order in the moving, changing, interdependent social and physical environment. How in the network of an infinity of interconnected details can we discover order? How can we[NB] find[NB] [38] a pattern in the

[38] This is one of the devices suggested by I. A. Richards. ? — ? and ! — ! are two other attention provoking devices, and, as Richards suggests, a writer (or a speaker) could invent others that would be more effective in a context than the usual quotes. For me, "NB" means here, of course, *Take notice. I mean to alert you to the fact that this word "find" carries with it a signification beyond the ordinary. It designates a method for "finding"; but, more especially, for "understanding" through discovery of pattern.* See I. A. Richards, "Communication Between Men: The Meaning of Language," *Cybernetics* (March 15-16 1951), 52.

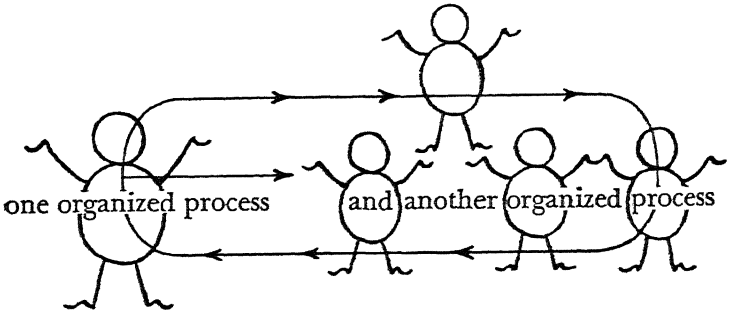
electromagnetic field? How can we discover the structure of the physical situation-as-a-whole?

A pattern is an arrangement of elements. The pattern is characterized by the order of the elements of which it is made rather than by the intrinsic nature of those elements. The nervous system is an abstracting as well as an organizing system. To say that the nervous system abstracts is to say that it *takes something away from the whole* environment which it entertains purposively. When the perceived arrangement of elements is designated by formators whose arrangement is precisely that of the arrangement of the elements of the physical situation it represents, we may say that the verbal pattern is a linguistic model of the actual pattern. To put this into the language of Korzybski, the "map" accurately represents the "territory."

The *purpose* of the individual monitors the abstracting process. If it suits the purpose of an individual to observe changes that occur chronologically, the elements he will abstract from the relevant environment will be related in time. Gregor Mendel was, for instance, interested in the characteristics of hybrid offspring in successive generations. Mendel's laws of heredity may be stated as a time pattern. *(This will occur in the first generation; this will occur in the second generation; and this will occur in the third generation.)* Just so, it may suit the purpose of an observer to abstract relationships in space. An interior decorator, on looking at a room, would be likely to do just this. An efficiency expert, on analyzing a production operation, may find that his purpose is facilitated by abstracting a space arrangement. Or, if a social worker were looking for reasons for juvenile delinquency, he would be searching for a causal relationship in the revelant environment. Etc.

Goal-seeking behavior is selective behavior, and it is purpose that unifies the abstracting process.

But our concern goes beyond the organization of the inner self as effected by the purposive abstractive process of the nervous system. And our concern goes beyond the recognition of organization in the actual world. It is the *cross* organization of the organized individual and the organized (desirable or undesirable) environment that characterizes field theory of personality and field theory of communication. The concept of cross organization is one upon which field theory of communication hinges. This is a *dynamic* concept, and yet one that describes *organization.* Cross organization connects two organized yet dynamic poles—that of the inner self and that of the relevant environment. This is a crossing over of



and—together—the field as a whole is organized. This means that there is both process and organization in the field as a whole. To say this another way, there is continuous organization of the situation-as-a-whole, but the organization of the situation-as-a-whole changes with every moment in time. Cross organization is, in the language of field theory of communication, *structured change.* And it is this structured change that the communicator must attempt

to control in the interest of purpose. This means that he must use his perception of change—inside himself and outside himself—constructively. And this is why we require a field theory of communication.

We require a field theory of communication because process is an aspect of life and because change is an ingredient of the communication process. We require a field theory of communication because control of change in the interest of purpose can be effected only by the control of the cross organization between the communicator and the relevant social environment. A field theory of communication[NB] conforms[NB] with a field theory of personality which admits of no strict boundary between the communicator and the relevant environment.

Field theory of communication is characterized by its attention to:

(1) Patterns in the actual world of people and things as perceived by the abstractive nervous system;

(2) Verbal patterns that designate "real" patterns—actual, possible, or even plausible; and

(3) Control of the changing pattern—the cross organization —of the relevant situation-as-a-whole.

In cross organization, the link between the verbal world and the actual world is structure, as Korzybski points out in *Science and Sanity*. Two things that have their structural characteristics in common, he says, "have all their logical characteristics in common." (page 60) Since the communicator must use words (first thought, then said) by which to relate his inner life constructively to the relevant environment, it is essential to explore the nature of thinking, thus to determine, in so far as we can, how best to establish that link between the verbal world and the actual world.

42. What is "THINKING"?

In Einstein's voluminous "Autobiographical Notes" there is one small paragraph that every semanticist will cherish. Here it is:

> What, precisely, is "thinking"? When, at the reception of sense-impressions, memory-pictures emerge, this is not yet "thinking." And when such pictures form series, each member of which calls forth another, this too is not yet "thinking." When, however, a certain picture turns up in many series, then—precisely through such return—it becomes an ordering element for such series, in that it connects series which in themselves are unconnected. Such an element becomes an instrument, a concept. I think that the transition from free association or "dreaming" to thinking is characterized by the more or less dominating role which the "concept" plays in it. (page 7)

When an element becomes an instrument for order, we have a concept. When an element connects things which are not otherwise connected, we have a concept. When an element relates things which are not otherwise related, we have a concept. And a concept characterizes thinking.

The emphasis upon relatedness in thinking has already been mentioned. We know that Ogden and Richards spoke of "uniting relations" and connections in psychological (as well as physical) contexts. We remember their phrase "hangs together," which, for them, symbolizes relatedness. In *The Meaning of Meaning* these authors used the word "determinative" in connection with contexts. A determinative context refers to a linkage in which at least one element *must be determined* given the others. Shallow water-diving-danger is a determinative context

because given shallow water-diving, *danger* is determined. A psychological linkage is a determinative context that establishes a relationship. Such a determinative context is "an instrument of order." As such, it is a concept. And a concept characterizes thinking. But the important point to recall here is that when a psychological linkage hangs together in precisely the way an external linkage hangs together, we have a true reference and a logical reference. This statement conforms exactly with Korzybski's map-territory analogy. It remained, however, for Morris to provide the semantic apparatus by which to analyze and to evaluate the structure of our thinking, and to move creatively toward experimentation in the making of new sign compounds.

To think is to make a verbal pattern consciously. To make a verbal pattern consciously is to think.

And now that the relationship between thinking and verbal patterns has been established, let us proceed directly to the nature of verbal patterns themselves—and how they are made.

43. A verbal pattern is an ARRANGEMENT OF FORMATORS

As I use the term, "formator" may be defined as a class word—a high order generalization—which establishes form in a written or oral statement. How formators are *arranged* to make a verbal pattern is the subject of this Section.

The arrangement of formators into a verbal pattern starts with the determination of a working-title. The working-title is composed of the most general formators required to summarize the content of any communication—written or spoken. Look, for example, at this working-title:

The nebular theory and the planetesimal theory

This working-title makes a place for everything that can be said about these two hypotheses concerning the origin of the solar system. And even if you didn't know one thing about these theories, you would know what you would have to know to discuss this topic adequately. The working-title determines what you must cover. You have here the bone structure, the skeleton, that supports everything else in the pattern.

Suppose that I find you reading a book entitled *Worlds in Collision.* Is this a book about a clash in ideologies? Or is it about actual worlds in space—say Venus and Earth? I do not know from this literary title. So I ask *What is the book about?* In order to sum up the contents of this book, you will need general terms; you will need formators. Your answer will, therefore, take the form of a working-title, whether you are conscious of this fact or not. You will say readily *It's about two collisions in the solar system; one about 1500* B.C., *the other about 700 or 800* B.C. In one sentence you cover the complete subject matter of this book, and, at the same time, establish the arrangement of the major formators. For Velikovsky's book is in two major parts: (1) collision ca. 1500 B.C., and (2) collision ca. 700 B.C. When Velikovsky established these major formators, his task was set out before him. He knew precisely what the book would have to cover and the order in which he would cover it. The literary title of his book is *Worlds in Collision,* but the working-title of this book—the title from which he worked—is *Collision ca. 1500* B.C. *and collision ca. 700* B.C. An author (or a speaker) is not likely to choose formators for his literary title, but he is obliged to choose formators for his working-title.

A working-title is the summary of a complete communication —written or oral. It is composed of formators of sufficient generality to make a place for everything the communicator wants to say. The working-title is the first step in the making of a complete verbal pattern.

A working-title answers the question *What is the book about?* Or *What are you talking about?* Or *What do I want to say?* And the answer must be in the form of one sentence or less. No more. The working-title *The nebular theory and the planetesimal theory* is less than one sentence; *Collision ca. 1500* B.C. *and collision ca. 700* B.C. is less than one sentence. Both answer the question *What is it about?*

Since the most general formators make a place for everything in the complete pattern, only these are included in the working-title. The minor formators and the formators which are subordinate to the minor formators are not included in the working-title. The working-title is thus only the first step in the making of a verbal pattern. Start, for example, with the working-title *Economic and political aspects of Democracy*. From this working-title, we may now construct the verbal pattern as a whole. The two major formators of the working-title will, of course, be the two major formators of the pattern:

1. Economic
    a) Management
    b) Labor
    c) Consumer
2. Political
    a) Federal
    b) State
    c) Local

This verbal pattern sets up major and minor formators. But the communicator may find that this pattern is inadequate to the development of a book or an article or even a speech. He may need further support. He may need to make each minor formator, again, a *whole,* for purposes of further breakdown. Like this:

1. Economic
   a) Management
      (1) Production
      (2) Distribution
   b) Labor
      (1) Wages
      (2) Hours
   c) Consumer
      (1) Products
      (2) Prices
2. Political
   a) Federal
      (1) Executive
      (2) Legislative
      (3) Judicial
   b) State
      (1) Executive
      (2) Legislative
      (3) Judicial
   c) Local
      (1) Executive
      (2) Legislative
      (3) Judicial

This procedure may be pursued until the communicator reaches that level of abstraction that covers his subject matter adequately for his purpose.

Notice the hierarchical nature of the pattern. The formators on the highest level of abstraction make up the major parts; those on a lower level, the minor parts; those on yet a lower level, the subordinate parts, etc. Notice that details and examples of firsthand experience do not have a place in the pattern, however elaborate it may be. The communicator will use a formator that will make a place for details and examples when and where he needs them in his complete development.

The completeness of any formative structure is commensurate with the intention of the communicator with respect to a particular audience. But however brief or exhaustive the verbal pattern may be, there is always the semantic task of establishing the proper *arrangement* of appropriate formators. Two requirements of logic must be met in this semantic procedure:

(1) The formators that purport to isolate the classes (designated by general terms) must not overlap; and

(2) When two or more classes are subsumed under one broader formator, they should be on the same level of abstraction.

A verbal pattern is an arrangement of formators. Its function is to establish the arrangement of the separate elements of a communication, written or oral, without regard for the intrinsic nature of those separate elements.

But there is yet another aspect of the arrangement of formators that is basic to field theory of communication; while it is of first importance that the formators of a verbal pattern be arranged in logical hierarchical order there is also another requirement. It is essential for the communicator to understand the *principle of organization* that binds the separate formators together. A pattern gets its definitive

name from the way the major formators hang together. Various kinds of patterns will be described and exemplified in the sections immediately following. These are the ones most frequently used:

Time pattern
Space pattern
Conjunctive sectional pattern
Disjunctive sectional pattern
Analogical sectional pattern
Cause to effect pattern
Means to end pattern

This is, of course, not an exhaustive list. There are as many kinds of verbal patterns as there are patterns discoverable in the world of people and things—actual, possible, or even plausible. You will, from time to time, invent others to conform with your subject matter. And, you may find, also, that the pattern of a verbal account may derive from form which does not use words at all. The architect who works from a blueprint does not require a verbal pattern; the comptroller who works from his figures does not require a verbal pattern; the physician who works from a chart does not require a verbal pattern; the artist who works from a sketch does not require a verbal pattern. We cannot communicate intelligently unless our words make patterns, but these verbal patterns may derive from form better expressed through another medium.

You will find, also, that a verbal pattern may "hang together" in more than one way. *Space* and *time* frequently come together, for instance. *(First, we went to Chicago, then we went to New York,* etc.) A *cause to effect* pattern is also a *time* pattern; a *means to end* pattern is also a *time* pattern. The communicator chooses that principle

of organization which best suits his subject matter and his purpose, as will be indicated below.

Field theory of communication also requires the determination of the principle of organization that binds the formators together.

A. TIME *pattern*

A few years ago, I conducted an experiment at Wells High School of the City of Chicago to determine whether or not the NBmakingNB of verbal patterns could facilitate the teaching-learning process. This is what happened the first morning. I faced a group of thirty young people about the age of sixteen. They did not know me. Without explaining my objectives or the plan, I talked to them, as in conversation. I said *Just so we will know each other better, would you tell me something about your Christmas holiday, yourself, your plans for the future—anything. Let's just talk this morning.* One girl rose to her feet. I asked her to step to the front of the room so that everyone could see her. She did. And this is what she said:

> I started taking dancing lessons when I was four years old. When I was in grammar school, I was on every holiday program. And now that I am in high school, I dance whenever we have a musicale. I love to dance. This Christmas holiday, I was offered a professional job—at a night club. This is something I had dreamed about all my life, so I talked it over with my parents and they agreed that it would be fine experience for me. So I took the job . . . I didn't like it. I didn't like the late hours and I didn't like the smoke and I didn't like the drinking and I didn't like the people. I have decided now that I don't want to be a professional dancer. I have decided that I

want to be a teacher, and I intend to go on to teachers college after I graduate from high school.

Notice that the speaker used time words—when, now, after, etc.—to bind her statements together. Notice, also, that the statements follow an orderly time sequence. This narration can best be set up, therefore, as a time pattern with these formators: *Before the professional engagement; during the professional engagement; after the professional engagement.* The key terms of this working-title are time words: *before, during,* and *after.* Here, again we have arrangement without regard for the intrinsic nature of the separate elements. Here we have order. Here we have progression. And the cohesiveness between the separate parts is established by time. To say this another way, the principle of organization is time.

If this girl told that story a hundred times, she would probably follow precisely the same time sequence. She would never use the same words twice, and yet she would have no fear of forgetting. She would never need to worry about what comes next. And yet she told me that she was not aware of the fact that her narration had taken the form of a time sequence.

If the girl had planned her talk, she might have sat down at her desk and set up the complete pattern like this:

Working-title: *Before, during, after professional engagement*

1. Before professional engagement
   a) Before grammar school
   b) Grammar school
   c) High school
   d) Christmas holiday

2. During professional engagement
   a) Hours
   b) Smoke
   c) Drink
   d) People
3. After professional engagement
   a) Decision
   b) Plans

The major parts of this pattern are derived from the working-title. *The working-title sums up the major parts.* Minor parts do not appear in the working-title. We call this a time pattern because the major parts present a time sequence. But notice the minor parts that support the three major parts. The minor parts that support the major Part *1* follow a time sequence. The minor parts that support the major Part *2* do not follow a time sequence. These are sectional in form (a pattern that will soon be explained). The minor parts that support the major Part *3* have two principles of organization, time and sectional. The decision precedes the plan in time; but the pattern is also sectional because each of these parts may be discussed independently of the other (as will be explained further in Section 51 below). It is sufficient to note here the complexity of the pattern as a whole.

Another example of the time pattern may be seen in the structure of Lincoln's "Gettysburg Address":

Past ("Fourscore and seven years ago . . .")
Present ("We have come here to dedicate . . .")
Future (". . . that this nation . . . shall not perish from the earth.")

The unity of this famous speech lies in a simple verbal time pattern.

The time sequence is *cohesive* because the formators "hang together" in time. Cohesive formators thus contribute to the unity of the verbal pattern. Unity of pattern enables the communicator to transmit pattern (and, thus, idea) and assists the recipient in the reception of pattern (and, hence, idea).

The time sequence is, also, *progressive* because time formators exhibit the characteristic of "continuing by successive steps"—of "moving forward and onward"—to use the definitive language of *World*. Progressive formators move toward the completion of the pattern. Such movement enables the communicator to maintain direction toward a predetermined goal and invites the recipient to participate in the movement toward that goal.

The time sequence is both cohesive and progressive. It establishes the unity of the pattern as a whole and indicates the movement and direction needed to complete the verbal pattern.

B. SPACE *pattern*

When Pamie saw her garden with three *rows*—onions, radishes, and tomatoes; in a particular *place* between two homes; and with a wire fence *around* the rows—she was making a space pattern.

The description of the house used in the Ogden and Richards context provides another example of a space pattern. This could be set up as a floor plan. And the structure of the verbal account could, and undoubtedly would, be in conformity with that of the drawn lines.

In the case of the time-and-motion expert, his attention is focused on the relationship of the worker to the thing. Layout is of the utmost importance. The efficiency expert will draw a diagram of an improved layout. He will then

proceed to move *things* from one *place* to another so that their relationship to people will be more economical of time and motion. If he must explain this project, his verbal account must be "congruent" with the diagram. His verbal account must, in other words, designate the *same* space *arrangement* of the elements as that established by the diagram. He cannot know the "territory" unless he understands the "map"—the diagram. And if he understands the diagram, he has an adequate space pattern.

The space pattern is, like the time pattern, cohesive. Space formators are contiguous; they "hang together" in space. Again, like the time pattern, cohesive space formators contribute to the unity of the pattern as a whole. Such unity of pattern enables the communicator to transmit pattern and assists the recipient in the reception of pattern.

The space pattern is a verbal "map." Again, like the time pattern, it is progressive. The communicator must move from one part of the verbal "map" to another, toward the completion of the pattern. Such movement enables the communicator to make a verbal pattern that is congruent with an actual (or hoped-for) pattern and invites the recipient to participate in the movement toward that goal.

The space sequence is both cohesive and progressive. It establishes the unity of the pattern and the movement and direction toward the completion of the verbal pattern as a whole.

C. Conjunctive sectional *pattern*

The sectional pattern is made up of parts which are relatively independent of each other. They derive their unity from a broader context. A section of a verbal pattern is like the section of a bookcase or the section of a library

card catalogue. Each section has the same form, but different contents. A sectional pattern may be set up as follows:

Economic and political aspects of Democracy

Here we have two sections, similar in form. Both are generalizations on the same level of abstraction. They are bound together in that both are *social* aspects of Democracy (if you agree with *World* and define "social" broadly as "dealing with the structure of society and the activity of its members"). "Social," so defined, is a generalization on a higher level of abstraction that includes *economic* and *political.* Both economic and political are, therefore, in the same frame of reference.

When two or more sections are set up within one frame of reference and joined together by the conjunction *and,* we have a conjunctive sectional pattern. We call a sectional pattern such as *Economic and political aspects of Democracy* an *open* sectional pattern, because other sections may be added. Sections on the religious or the cultural aspects of Democracy may, for example, be included. When all possible aspects of Democracy find a place in the sectional pattern, we call it a *closed* sectional pattern. *The pro and the con of chain stores* would be a closed sectional pattern because it makes room for everything that can be said for or against chain stores.

The major parts of a conjunctive sectional pattern are joined together by the conjunction "and."

The major parts of a conjunctive sectional pattern are relatively independent of each other, but belong within the same frame of reference.

A conjunctive sectional pattern is open when more major parts may be added.

A conjunctive sectional pattern is closed when no other major parts may be added.

The usefulness of the conjunctive sectional pattern is already apparent. We have used it in connection with *Collision ca. 1500* B.C. *and collision ca. 700* B.C.; we have used it in connection with *The nebular theory and the planetesimal theory*. In each case the sections are relatively independent of each other.

There is no cohesiveness between the parts of a sectional pattern in the sense that time and space hang together. The communicator must, therefore, establish a principle of organization to hold the parts together. You may ask, and rightly at this point, *If we must find some way of establishing cohesiveness between the relatively independent parts of the sectional pattern, why take the trouble to designate the pattern as sectional at all?* The answer is this. When parts are relatively independent of each other, it is, frequently, important to consider them independently and not conjointly with other parts. Analysis and evaluation are much sharper when contexts are delimited in scope. But there is yet another advantage. In a history lesson at Wells High School, for instance, the title of a chapter was, *The Economic and Political Causes of the American Revolution*. This chapter fell into two parts. After the lesson was covered, a pertinent question was *Does this chapter take the form of an open or a closed sectional pattern?* This is the same as asking the question *Were those the* only *causes of the American Revolution?* If not, what other possible causes may be considered? And this is always a pertinent question when two or more sections are considered. *Are there any other aspects which rightly belong in that frame of reference?* A sectional argument, exposition, etc., may be very

well developed, as far as it goes, but it may omit something of importance. An open sectional structure is always, therefore, subject to analytical and critical investigation.

The conjunctive sectional pattern has its special usefulness in that it calls for further analysis of the frame of reference into which the formators fall.

And now, to illustrate again how natural it is to make verbal patterns, I shall cite an incident that occurred at a meeting of the elementary-school teachers of Chicago. I was invited by this organization to speak on the topic, "How to Study." The purpose was to consider the use of techniques of communication in the learning process on the grade school level. I explained to them that it was difficult to discuss this abstractly without the learner; that we refer now to the teacher-learner situation-as-a-whole. I asked if I might bring Jill, Pam, and Wendy. The four of us sat around a table equipped with microphones and talked, as we so often do. ("Let's have conversation!") Of course, nothing had been rehearsed. We proceeded very much as usual. *Jill, what have you been reading lately?* Jill said she had just finished reading *The Call of the Wild.* I asked her to tell us the story. We timed Jill's narration and it ran twelve minutes. When she had finished, I asked the other girls *What was the story about?* Now this is the question that must be asked to get at the working-title (of the narration, in this case, but of any lesson which must be read and studied). Pamie said, "It was about a dog." This answer is, of course, correct, and any adult might begin just there. The communicator looks at such a statement and finds that it is, indeed, a synthesis. It includes all. But the communicator must analyze further to discover the components of this synthesis. Unless he can do this, the

statement is not useful as the basis of a verbal pattern, for a verbal pattern is *an arrangement of* parts *that come together to make something whole.* With this in mind, I said to Pamie: "That's right, Pamie, as far as you go. But I'd like to know more. What was it that Jill told us *about* the dog?" Pamie was taking too much time to think, so Wendy, then six, popped up with this: "It's a story about how a dog got hurted and how he got saved." And it was, indeed. Here are formators which are held together in time. Yet the pattern is, also, closed sectional; closed, because these two sections make room for everything in the narration; sectional, because each part can be considered independently of the other, though both are in the same frame of reference ("It was about a dog"). Though only six years old, Wendy had made a verbal pattern altogether naturally.

D. Disjunctive sectional *pattern*

Everything that has been said about the conjunctive sectional pattern may be said of the disjunctive sectional pattern except that in the latter the parts are not only relatively independent of each other but mutually exclusive. The word "*or*" establishes the disjunctive relationship between the formators. *Decision in re Plan 1 or decision in re Plan 2.* In this working-title we have two sections; one must be accepted, the other rejected. We would probably use these formators to set up the pattern like this:

1. Decision re Plan *1*
   a) Analysis
   b) Evaluation
2. Decision re Plan *2*
   a) Analysis
   b) Evaluation

This is a closed sectional pattern if the scope is completely covered by the two mutually exclusive parts. If more possibilities are available (P_1 or P_2 or P_3, for example) this sectional pattern is open. The minor parts are, however, in each case closed, since analysis and evaluation make a place for everything that can be said before decision. Under analysis, the communicator will use designators; under evaluation, appraisors.

The major parts of a disjunctive sectional pattern are mutually exclusive. The characterizing term here is *"or."*

E. Analogical sectional *pattern*

When we speak of an analogy between two things, operations, relations, etc., we indicate by that term that there are similarities between the two things described but that there are, also, differences. It is obvious, therefore, that an analogical pattern is useful in comparisons of things, processes, relations, etc. When Pamie, at the age of four, turned to Jill and said, "Grandma's hands make wonderful spoons," she was making an analogical pattern, without any awareness, of course, of her semantic skill. Grandma's hands were *like* spoons, but were, of course, quite *different.*

When Pamie gets to high school, she will probably set up analogical patterns on the conscious level. She may then, for example, set up formators in the following pattern:

Working-title: *Similarities in man and ape; differences in man and ape*

1. Similarities in man and ape
   a) Physical
      (1) Bone structure

(2) Nervous system
Etc.
b) Behavorial
(1) Individual
(2) Social
2. Differences in man and ape
a) Physical
(1) Bone structure
(2) Nervous system
Etc.
b) Behavorial
(1) Individual
(2) Social

The analogical sectional pattern is especially important because when we find similarities between two things, two operations, two relations, etc., we may extend our knowledge of either or both by assuming that similarity goes beyond what is already established. John M. Shlien of the Counseling Center of The University of Chicago speculated as follows, for example: *Physical ill health is sometimes contagious; perhaps psychological health may be contagious.*[39] This is analogical thinking. Here we have similarity of relationship but difference of elements. Here the mechanism of transmission from person to person is considered in respect to another set of phenomena. The analogical sectional pattern is:

Working-title: *Physical transmission from person to person; possible psychological transmission from person to person*

[39] John M. Shlien "A Criterion of Psychological Health," *Group Psychotherapy,* IX, No. 2, August, 1956.

. Physical transmission from person to person
How? (Through physical contact)
:. Possible psychological transmission from person to person
How? (Through psychological contact)

ihlien's assumption is, of course, a verbal invention. set up a "construct"—a speculative "model" it may be ed, in this connection—which he used as the basis for estigative operations.

\ linguistic experiment in analogical thinking may also used as the basis for deduction, with the further pur- e of putting the deduced consequences of the assump- as to operational tests. The mathematical biologist Ana- Rapoport cites one famous example in his *Operational losophy* (1953). The philosopher-physicist de Broglie culated as follows: "If wave phenomena exhibit char- eristics of particles in some aspects, can it be that par- es exhibit wave characteristics too?" (page 220) The uced consequences of this experiment in sign com- mds (to use the language of Morris) were put to pirical tests. And the answer proved to be *Yes.* The bal experiment led to actual experiments that led, in n, to increased knowledge.

Richards points out, in his paper on "Communication ween Men: The Meaning of Language," two great logies in the history of civilization. The first is the tonic analogy between the State and man; the second he analogy which Norbert Wiener and his associates now exploring between the machine and man. In logies, Richards says, the traffic is two-way. Each area fits by attention to the other. Because of the fertility

of such investigative procedures, Richards suggests "that among new sciences that may emerge there might be the theory of analogies, systematically developed." (page 46)

The analogical sectional pattern makes it possible for us to see differences in similar things, etc.; similarities in different things, etc.

The analogical sectional pattern makes it possible for us to advance knowledge by an extension of similarities already established.

F. Cause to effect *pattern*

In the early days of my work at the University, observation of the actual use of signs was the method used by which we approached communication theory. We did a lot of talking, and we did a lot of listening. Much of the talk was recorded, and everthing that was recorded was analyzed and evaluated by the group as a whole. One thing that we discovered was the inescapable fact that every time a man talked about an actual problem that confronted him in his office, his plant, etc., his words could be summarized as a cause to effect pattern. An analysis of the problem seemed, in each case, to be a search for causes of the trouble (the undesirable effect). If a man penetrated to the causes of the trouble, he felt that he had properly analyzed the problematical situation. If he had not, he felt that this was the first task. Either the industrial organization had to discover the cause(s) of the trouble, or expert engineers had to be engaged for this technical task.

Suppose that a production manager in a canning factory finds that canned foods are showing a high percentage of spoilage. This is an undesirable effect of something that is going on in the factory. But what? Here is a list of all the possible areas in which the cause(s) may be found:

Manufacture of cans
Inspection of cans
Filling of cans
Heating of cans
Cooling of cans

By manipulating each one of these physical operations it is possible to discover that the trouble lies in the *making* of the cans, that there is a defect in the sealing of the cans which permits the intrusion of bacteria. The actual point of defection is determined. In discussing his problem, this is the verbal pattern which the production manager set up:

Working-title: *Defection in the manufacture of cans causes spoilage of canned foods (undesirable effect)*

1. Cause
   ↓ Defection in the manufacture of cans
2. Effect
   Spoilage of canned foods

We use the term *cause to effect* pattern to describe a relationship that is established by the controlled manipulation of all possible relevant factors. This is the area of inquiry into *physical* subject matter. The statement of the cause to effect relationship is a working-title that is made up of designators that denote. This gives the relationship the status of fact.

But controlled manipulation of all revelant factors is not always possible. This is the case when the subject matter is not physical but *social.* If, for example, we are dealing with juvenile delinquency or with poor morale in a plant, we can state the problem only as an *imputed* cause

to effect relationship. The investigator can say only *In my opinion, these are the causes of this undesirable effect.* In such cases we do the best we can, through observation and statistical methods, to determine causes.

The cause to effect pattern describes a relationship that is established by controlled manipulation of physical subject matter. Since the statement of the relationship is signified by designators that denote, the pattern has the status of fact.

The imputed cause to effect relationship refers to social subject matter. Since the relevant factors are not subject to controlled manipulation, the relationship cannot be signified by designators that denote. The pattern has, therefore, the status of opinion.

Morris gives us the semantic apparatus by which to distinguish between fact and opinion.

The men were pleased—and surprised—to know that they were making orderly cause to effect patterns in their discussions of problems. But, they argued *Every problem must be analyzed. We didn't know we were making cause to effect patterns and yet we made them! Why do we need to know we made them? And what good does it do to make them on the conscious level when we do so well without an awareness of the procedure?*

This argument never fails to come up with every new group. The answer is this: If we know we are making a causal pattern, we can set it up in its bare essentials and look at it—analytically and critically. *Are these all the possible areas in which causes may be found? Is the area under investigation physical or social—or both? In the verbal pattern which signs are designators? And do they or do they not denote? Where do we have fact? Where do we have opinion?* These are the questions that must be

answered before the communicator can present his analysis of the problem to others. When his words state facts that are referable to evidence, he is on firm ground. When his words state opinions as based on all available relevant facts, his statements are less positive, his attitude is receptive of other opinions, and his suggestions concerning solution are tentative and open-end.

G. Means to end *pattern*

A means to end pattern is the predetermined plan that signifies operations toward an objective. The communicator wants something that does not yet exist. He wants, in some way, to change the *status quo*. He constructs a verbal pattern of a hoped-for actual pattern. The means to end pattern looks, therefore, to the future.

If it is true, as psychologists and philosophers alike tell us, that all inquiry begins with a problem at hand, it is also true that any plan that looks to the future must begin with an understanding of *what is*. To say this in other words: the analysis of the problem is the first step toward the solution of the problem. And the analysis of a problematical situation takes the form of a cause to effect pattern or an imputed cause to effect pattern, as described above.

Suppose that the structured situation-as-a-whole which the communicator desires to change may be designated as a cause to effect relationship that denotes. His movement toward a more desirable situation-as-a-whole is, in such a case, prescribed. He has only one choice. He must remove the cause that produces the undesirable effect. When, for example, the fact is established that defective cans cause spoilage, there is only one course by which to

achieve the desired end. The means to end pattern must take this form:

Working-title: *Control of can manufacture is the means by which to reach the desired end (elimination of spoilage)*

1. Means (Control of can manufacture)
   a) Making
   b) Inspecting
2. End (Elimination of spoilage)

Here we move from *what is* to *what will be.* Here we move from an undesirable situation-as-a-whole that is designated as a cause to effect pattern to a desirable situation-as-a-whole through a program that is designated as a means to end pattern which, again, will denote. The program is clear; there is little or no freedom of choice as to solution; the movement from one structured situation-as-a-whole to another is virtually prescribed. As Warren Weaver points out in *The Mathematical Theory of Communication* (1949), when a situation is highly organized, it is not characterized by a high degree of randomness. This suggests here that the *choice of means* by which to reach a desired goal is restricted.

But an imputed cause to effect relationship deals with subject matter that is at least in part social. When, therefore, we move from an imputed cause to effect relationship to a means to end hypothesis, we are in the area of opinion. The elements are not controllable; the elements cannot be manipulated experimentally. When we deal with social subject matter, the procedure with respect to change is not definitely prescribed. To put this into the language of communication engineers, the situation-as-a-whole is char-

acterized by a high degree of randomness—by a high degree of disorder. In such cases, there is wide freedom of choice as to the means by which to achieve a given end. There are, in other words, many possible choices. And every choice will be based upon judgment—better or worse—and relevant facts.

In the area of social inquiry, the communicator moves from *what is* toward *what is desired* tentatively. The entire procedure is open-end and subject to revision on the basis of more information. This means that the communicator becomes a recipient of every informative sign, verbal and nonverbal, from the relevant environment. If he would control change in the interest of purpose, he must engage in a circular interactive process with the relevant environment.

The means to end hypothesis may be, and usually is, a long-term program. Korzybski set up General Semantics as the means by which to achieve sanity; Morris set up a science of signs as a means by which to advance self-making and man-making; I have, in this book, set up semantic devices, again, to achieve a humanity of words—an efficient use of language toward human goals.

In such long-term goals we set up a series of *What nexts?* as Dewey puts it. Each *What next?* becomes an immediate end that will take us toward the final end-in-view. At the completion of each *What next?* we take a look around. We appraise the consequences of our actions against the anticipated results. We reappraise the entire means to end hypothesis. And we may alter our strategy. We may, indeed, change the ultimate goal.

Verifiability in the means to end hypothesis is never exact. The means to end hypothesis includes within itself

operations which need to be performed by human beings. Even if the desired end ensues, we can never be positive that the instituted means gave rise to the end. The end may have resulted from factors unknown—or even unknowable. But, as Dewey points out in his *Logic: The Theory of Inquiry* (1938), the absence of verification does not minimize the importance of the means to end hypothesis. Verifiability is not so important, he says, as the directive power of the hypothesis—of the verbal plan that directs activity toward the realization of a foreseen goal.

The means to end pattern has a high or lower degree of predictability, depending on the nature of the subject matter.

The means to end hypothesis has a high degree of predictability when it rests upon a cause to effect pattern in which the terms designate and denote that relationship.

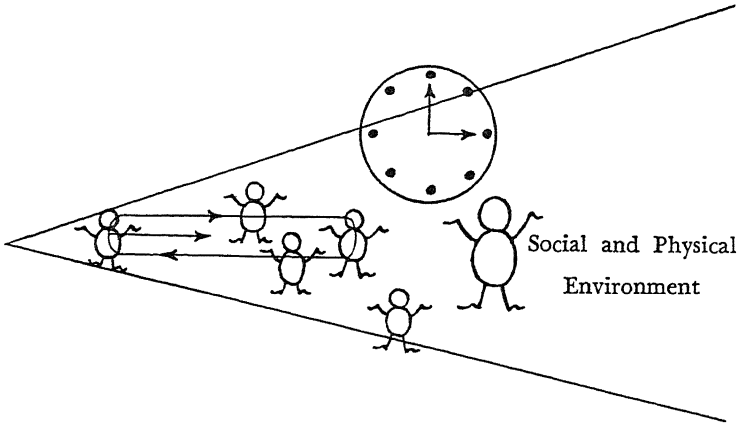
The means to end hypothesis has a lower degree of predictability when it rests upon an imputed cause to effect pattern. In such a case, the communicator will keep the procedure open-end and subject to correction on the basis of new information.

44. A FIELD THEORY OF COMMUNICATION DEFINED

What is field theory of communication, and how does it differ from other theories?

Field theory of communication provides the semantic techniques by which to *use change* in the interest of purpose. These semantic techniques are: 1. FEEDFORWARD, and 2. FEEDBACK, both of which are exercised most effectively through the use of verbal patterns.

Look, first, at this analogical model of a face-to-face communication process:



Notice that the communication process is a circular, and not a linear, experience. The communicator sends. He directs his words toward an objective—the relevant environment—in the interest of a purpose. This is his output. *As a consequence of his words,* his recipients exhibit some kind of change. Whatever he is able to perceive of this change in his input. The communicator must entertain this input in his ensuing output. He uses it as new information by which to proceed toward his goal. Again, his words and actions have consequences. Again, his words effect change in his recipients. And, again, whatever the communicator is able to perceive of this change is used as new information in subsequent output. There is, thus, an output-input-output-input continuum which causes change at both poles.

Change is significant in the communication process because the user of words is attempting to change the *status quo* in some way. Otherwise there would be no need for words. It is the change, then, that must be directed and controlled by the user of words in the interest of his purpose.

Change is directed and controlled by the exercise of feedforward and feedback, as follows:

1. FEEDFORWARD

Richards introduced the term "feedforward" in his paper entitled "Communication Between Men: The Meaning of Language."

Feedforward is a word that is here used to designate the use of a cohesive and progressive verbal pattern to cause a recipient to predict the form which the whole pattern will make.

The communicator can declare, at the outset, what he is talking about. Here, of course, he will make use of formators. But even if he desires to create suspense and keep his recipients in the dark, he cannot avoid feedforward once he begins systematically to develop a cohesive and progressive verbal pattern. A pattern is cohesive when it has unity, when every part is essential to the whole and when the parts "hang together" to make that whole. A pattern is progressive when, once started, it moves from part to part in invariable order toward the completion of the pattern as a whole. When a communicator begins, let us say, a time sequence, he feeds forward this principle of organization by his necessary choice of time designating words. The recipient begins to await the passing of time and its concomitant significance to the sequence as a whole —to the verbal pattern as a whole. Just so, if the communicator feeds forward the principle of organization that is called spatial, the recipient will move along with the contiguous space pattern that the user of words has originated; given causes, the recipient will anticipate effects; given means, the recipient will look forward to ends.

It is the obligation of the communicator to transmit pattern. This he can do most efficiently when he feeds forward on the conscious level.

2. FEEDBACK

Feedback is a term that has made its way from recent technical literature to communication theory. The term "feedback" is used to refer to any mechanism that *responds to the results of its own action in its subsequent behavior.* To say this in different language, feedback refers to a circular mechanism that uses input as new information in its subsequent output. Feedback is the use of incoming messages in connection with unfinished business. To use now the language that refers to the communication process between human beings, this means that the user of words looks, sees, listens, and perceives in every possible way the consequences of his own words, and uses this input as new information by which to proceed more effectively toward the accomplishment of his goal.

Feedback is a corrective circular operation, and its effectiveness is dependent upon the use of a cohesive and progressive verbal pattern.

The verbal pattern determines the kind of correction that must be made with regard to input. The communicator is adaptive to the relevant environment, but always *adaptive in terms of his projected goal.* The flexible use of input as new information is thus stabilized by the unity of the pattern. And movement toward the completion of the pattern as a whole is insured by the progressiveness which is inherent in the pattern. The communicator adapts favorably to improve his position, and yet he does not lose his way.

Field theory of communication provides a method:

(1) For the making of verbal patterns through formators

(2) For the recognition of verbal patterns through formators

(3) For the transmitting of verbal patterns through feedforward

(4) For the exercise of corrective measures through feedback

(5) For the effective cross organization between the communicator and the relevant environment

(6) For the use of change to effect desired change in preferred design

45. Field theory applied to READING

The study of communication begins with a reading program, for learning to read not only involves learning to think, but it also establishes criteria by which we may evaluate the quality of our thinking. The students at University College work, first, with editorials; then, with periodical literature; and, finally, with books. The printed page remains unchanged and is, therefore, the stable ally of the student of communication.

As a first step, all students in the class read, analyze, and evaluate the same editorial. There is always that question *Will everyone extract the same verbal pattern from the same work?* The answer is usually *Yes*—for competent readers. The students are quick to see that the working-title of an editorial is, as a rule, standard:

Facts re——; evaluation of facts re——; suggestions for change

The principle of organization is sectional; the purpose of the writer, threefold: to state the facts (and here he will

use designators); to evaluate the facts (and here he will use appraisors); and to make recommendations for change (and here he will use implicit or explicit prescriptors, usually the latter).

The more difficult task is to find the supportive formators. *What are the facts?* Do the designators follow a sequence of time formators; do the designators follow a sequence of cause to effect formators; are the designators conjunctive, disjunctive, or analogical sections? The supportive formators for the evaluation of facts may (and usually do) follow the pattern of the exposition of facts. And the recommendations for change are usually in the form of a means to end pattern. The writer may indicate only what should be done and by whom (the *means*) or, he may indicate only the goal (the *end* sought), or he may indicate both means and end.

Analysis of the editorial by the students is followed by evaluation, and here the formula of Morris is used. Do the designators denote? Are the designators relevant to the frame of reference? Are the designators exhaustive, or has something been left out? Do the appraisors rest upon true and sufficient designators? Do the prescriptors stem from such appraisors? Do we have, as Morris cautions, *first* designators, *then* appraisors, and *only then* prescriptors? Or, is the editorial weak in designators, strong in appraisors, and dogmatic in prescriptors?

You will recall that in Part Four we drew on Norman Cousins' editorial, "Clean Bombs and Dirty Wars," for examples of designators, appraisors, and prescriptors as defined by Morris. The discovery of modes of signifying is requisite to the analysis of the editorial. But now we must move ahead to set up formators which will make it possible for us to make a working-title that is inclusive of the

subject matter of the editorial. "Clean Bombs and Dirty Wars" is, of course, a literary title. Here is the verbal pattern:

Working-title: *Facts re H-bomb testing; evaluation of facts re H-bomb testing; recommendations*

1. Facts re H-bomb testing
   a) Report re meeting
   b) Report re testing
2. Evaluation of facts re H-bomb testing
   a) Immediate effects of testing
      (1) Re disarmament negotiations
      (2) Re control of nuclear weapons
      (3) Re relationship with peoples of world
   b) Ultimate effects of testing
      Destruction
3. Recommendations
   a) Means
      (1) Stop testing
      (2) Institute controls
      (3) Establish new relationships
      (4) Make relationships enforceable by law
   b) End—Survival (implicit)

This analytical procedure enables the reader to synchronize his thinking with that of the author. Such a coming together of reader and writer is accomplished by congruence of structure. Having made a verbal pattern that is representative of the written work, the reader is then able to detach himself from the work and look at it critically. If he is satisfied that the designators denote; if his perspective is congenial to the evaluation of the author;

he is likely to go along with that author in his recommendations.

This, then, is the procedure that must be followed in the analysis of an editorial. The class works together on editorials until students are satisfied that all are likely to find the same verbal pattern and that the discovery of pattern is essential to the understanding and the evaluation of a written work.

The analysis and evaluation of editorials is a sitting-down-reading-discussion program. Having made this first step, we move to periodical literature, and here every student is on his own. Each one is asked to choose a field of interest, and the only requirement is that the student must *want* to read and talk about the topic of his choice.

When a reader concentrates on one broad topic, he soon finds that the general topic can be represented by one organizing formator that systematizes others of lesser scope. *The Architectural Record,* for example, is concerned with one broad formator, architecture; and lesser formators may be design, materials, etc. Every periodical, the reader soon finds, follows such a hierarchical pattern. A Journal of Communication will, for example, include articles on reading, writing, speaking, and listening. And special aspects of these formators can, in turn, be stated as formators which are on a lower level of abstraction. Thus, a Journal of Communication would carry articles on poetry, the drama, the novel, reports, letters, conferences, etc. The point to be made here is that the reader soon begins to look at his topic of interest as an organized body of information. Everything he reads has its place in the structure of the topic as a whole.

At this stage, periodical literature suits our purposes

exactly. In articles, we can most easily discover patterns. In articles, we can accumulate information from many sources and from different points of view. There is also the utilitarian fact that the student feels free to mark his copy in the analytical procedure. And material is readily available. There is a periodical to meet virtually every interest, from comic books to pure science. Read the article that has the strongest pull on your interests. Read straight through, and at your usual speed. Then ask yourself *What does the author say?* You may not yet be ready to make a working-title, for the making of a verbal pattern may not yet be a habit with you. If so, read the article again, more slowly, and mark important points in the margin, as you go. Circle a key word; it may turn out to be a formator. (If you begin to underline, you'll hardly know where to stop, and what we are interested in now is the key *word.*) Then ask yourself again *What does the author say?* Sum up the article in one sentence or less. And now read the article once more to determine whether or not your working-title makes a place for everything in the article. If not, the working-title must be made broader, either by the use of more general formators or the addition of formators. But don't make the mistake of attempting to include introductory material in the working-title. The introductory material is explanatory—perhaps historical, perhaps definitive of terms, perhaps aimed at establishing a mood—but it does not belong in the pattern. It does not, therefore, belong in the working-title.

When you are satisfied with your working-title, determine the principle of organization that binds the major parts together. Proceed then to the next task of finding subordinate formators which will support the major

formators that make up the working-title. Again, determine the principle of organization which binds the subordinate formators together, thus to make a minor whole.

If this sounds like a formidable task, let me assure you that an author is usually your ally. He is likely to make every effort to transmit the structure of his thinking. This is the case, for example, in an article by Carl R. Rogers, Professor of Psychology and Executive Secretary of the Counseling Center of the University of Chicago, which appeared in the Northwestern University publication, *Communications in Today's World.* The literary title is: "Communication: It's Blocking and its Facilitation." No one could ask for a more exact working-title. But Rogers does even more for his reader. After a first introductory paragraph, Rogers indicates what he intends to cover and the order in which he will handle his points. The major structure is, therefore, provided. The reader is required, however, to find the supportive formators. Here is the pattern as a whole:

Working-title: *Communication: its blocking and its facilitation*

1. Blocking
   a) Theory
   b) Practice
      (1) Person to person
      (2) Small groups
2. Facilitation
   a) Theory
   b) Practice
      (1) Person to person
      (2) Small groups

c) Possible extension of practice
(1) Large groups

Analysis requires the determination of the principle of organization that binds the parts together. In this case, both major and minor parts are closed sectional in form. Evaluation requires an investigation of the modes of signifying of the formators. The major formators are in the designative mode; thus the primary purpose of the author is to inform. In the minor parts, the writer moves from designators to appraisors and (in Part 2) to prescriptors. His secondary purposes are, therefore, to evoke an attitude response and an action response in the reader. However the reader responds, this response should follow, and not precede, the analysis and evaluation of the work.

How does the reader know that he has extracted the correct pattern? The working-title (and, hence, the pattern as a whole) must make a place for everything in the article. The pattern must, in other words, be inclusive. The formators must also represent the *arrangement* of the elements of the author's thinking, without regard for the intrinsic nature of the elements.

When the structure—elements and relationship between elements—of the verbal pattern is congruent with that of the article, both have all their logical characteristics in common.[40]

When the primary purpose of a writer is to inform, he usually takes pains, as Rogers did, to make a readily perceptible verbal pattern. He is likely to indicate at the outset what he expects to cover, to indicate clearly the

[40] This is the difference between what has, over the years, been called an "outline" and what we refer to as a "pattern." The outline may be a summary of elements. The pattern is a summary of elements, but one in which the *relationship between the elements* is of equal importance.

transitions from one major part to another, and to conclude with a recapitulation of what he has covered. He hits hard at formators. His aim is to transmit the verbal pattern in order to insure understanding. But when the writer's purpose is to elicit an attitude and/or action response, he is not likely to emphasize pattern. He will probably use designators, appraisors, and prescriptors for the sake of persuasion rather than for the sake of transmitting pattern. Cousins' long introductory paragraphs concerning "the language of madmen" are, for example, entirely appraisive and devoid of formators. The purpose is, of course, to achieve an attitude response. After the introduction, Cousins moves *from* designators, *to* appraisors (not of the "language of madmen" but of the actual facts), *to* prescriptors. One paragraph is given over to five questions. A question is always incitive. It asks for an answer. It asks the reader, therefore, *to think—with the author.* A paragraph of questions is a paragraph of concentrated prescriptors. And, since the reader has already been prepared by appraisors which rest, in turn, upon designators that denote, Cousins moves toward these prescriptors with semantic efficiency. But Cousins makes no effort to delineate pattern by means of formators. In such a case, the responsibility rests with the reader. *He must ferret out formators and make pattern.* Only so can he establish the relationship between designators, appraisors, and prescriptors. And, until this is accomplished, he cannot properly evaluate the work.

It is apparent, then, that in the analytical and evaluative procedure, the reader must exert control. His is not a passive operation. His responsibility is only second to that of the writer. With practice, analysis and evaluation can be performed simultaneously and skillfully; but, for the

beginner, the separation of these two operations is insurance against premature judgment.

The transition from the reading of periodical literature to the reading of books is made without effort, for the reading of a book presents no additional problems and requires no additional skills. The literary title of a book may or may not be a clue to the verbal pattern, but the table of contents should be, and usually is, the key to the organization of the book. Every chapter becomes a unity within itself with its controlling formators and its supportive minor formators. But the book as a whole has its own unity, its own pattern as derived from its own working-title. The working-title will circumscribe the scope of the written work and will indicate, thus, what the book is about. And, since the formators of the working-title are in designative, appraisive, and/or prescriptive modes of signifying, the working-title will, also, be a clue as to the purpose(s) of the author.

To think is to discover relations. To read is to penetrate to the structure—to the relations between formators—of a written work. To read is to think—with an author.

46. Field theory applied to WRITING

The special significance of field theory to writing derives from our definition of communication as cross organization, by means of words, between a communicator and recipient(s). To put this into other words, if we think of communication as the transmission of ideas and ideals as form—as verbal pattern—certain corollaries in respect to writing follow.

One way to classify kinds of writing is in respect to ırpose. Using this mode of classification, we find three tegories: (1) Writing which aims primarily to inform;) Writing which aims primarily to persuade to an atti- ıde and/or action response; and (3) Writing which aims imarily to communicate an idea or ideal as an aesthetic perience, both for the writer and for the recipient. But ırpose is, of course, never "pure." We are feeling-think- g-doing creatures. Just as purpose is mixed, we are in- ined to mix our modes of signifying even without nscious effort. Nevertheless, classification according to ırpose permits us to relate the basic aspects of field theory writing.

(1) Writing which aims primarily to inform

When we write to inform we use semantic devices *vertly* to facilitate the transmission of form. This is a mple procedure that effects the desired purpose—to ıform—in a suitable recipient with a minimum of effort ıd a maximum of efficiency.

Use your working-title as your literary title.

Make use of your working-title to establish the form of ıe work. A major formator may be the basis for the title f a chapter; it may be the heading of a part of an article; may be the key term of a paragraph of a letter.

Recapitulate at the end. This is simply a rephrasing ıd probably a (small) amplification of the working-title.

Use simple declarative sentences.

Use designators, and give evidence that the designators enote.

(2) Writing which aims primarily to persuade

The verbal pattern is, of course, basic to this effort,

and when the writer moves efficiently from designators to appraisors to prescriptors he makes use of an arrangement which a suitable reader is likely to find progressively acceptable.

All modes of signifying may be used as persuaders. (A scientist, businessman, etc., may require nothing but designators as persuaders to a feeling or an action response.) But when any one of the modes of signifying is used to persuade, Morris calls the language valuative in purpose. This means that the user places a value on something—for or against—and uses such signs as he believes to be the most effective to induce his particular recipient(s) to feel with him and to act with him.

We express our values through the use of adjectival and adverbial persuaders. Cousins, you will recall, referred to an act as "fiendish," to the imagination as "monstrous," called wars "dirty," referred to the use of the word "clean" in connection with bombs as an "obscene" farce. But verbs can also be persuaders. "Incinerate," when used not in connection with garbage but human beings, is such a word. Our nouns too, may be persuaders. Quick-trigger "psychosis," obscene "farce," moral "shrinkage," are such terms. Thus, it becomes apparent that a whole sentence—subject, predicate, and modifiers—may be valuative in purpose. Every word may be saturated through and through with value content. Every word may be a persuader.

When a writer uses words primarily to persuade, he will normally select signs that are likely to communicate attitudes and the necessity for action because of the worth—the value—of such attitudes and actions. A writer may, therefore, look at his work critically by asking himself these questions: *What values underlie this effort? What do*

in the language I have used? Does the work hang together because of its consistent (implicit or explicit) reference to those values?

(3) Writing which aims primarily to communicate an idea or ideal as an aesthetic experience, both for the writer and the recipient

In his *Principles of Literary Criticism* (1928), I. A. Richards says:

> The artist is concerned with the record and perpetuation of the experiences which seem to him most worth having . . . He is the point at which the growth of the mind shows itself. His experiences . . . represent conciliations of impulses which in most minds are still confused, intertrammelled and conflicting. His work is the ordering of what in most minds is disordered . . . But when he succeeds, the value of what he has accomplished is found always in a more perfect organization which makes more of the possibilities of response and activity available. (page 61)

> The problem . . . of how we are to obtain the greatest possible value from life . . . becomes a problem of organization, both in the individual life and in the adjustment of individual lives to one another . . . (page 58)

Richards associates value with art and art with form. It is the function of the artist to create and transmit form, and his genius lies in the "supreme communicability" of form. When the writer intends to transmit form as an aesthetic experience, his purpose is that of the artist. He would contribute only to that human value which is concerned with "a more perfect organization."

A work of art communicates an idea or an ideal as an

organismic—total—experience. For the artist and for the recipient this experience "is apt to be," as Susanne K. Langer suggests in her *Philosophy in a New Key* (1942), "something much deeper than any intellectual experience . . ." (page 260) But semantics is concerned with the communication of ideas and ideals *on the conscious level* and is, therefore, not suitable to the analysis and evaluation of a written work of art. When, however, a writer is concerned with form on the conscious level, semantics may be a valuable critical tool. For to be concerned with form on the conscious level is to be concerned with the systemic use of language for which the appropriate mode of signifying is the use of formators.

Writing to inform may be called primarily formative-designative; writing to persuade may be called primarily appraisive-prescriptive; and writing to transmit form as aesthetic experience may be called systemic in inspiration and formative in its effects upon human experience.

47. Field theory applied to the SPEAKING-LISTENING *transaction*

We come again to the statement which sets field theory of communication apart from others:

Communication is a circular and not a linear process.

We cannot discuss speaking as an isolated phenomenon; we cannot discuss listening as an isolated phenomenon. Cross organization between the communicator and the relevant environment is a transaction—a crossing-over between at least two people. This section is concerned only with ways in which to facilitate the verbal crossing-over in the interest of goal-seeking behavior.

Let us consider the speaking-listening transaction on three levels of complexity: 1. CONVERSATION, 2. CONFERENCE, and 3. PUBLIC ADDRESS.

1. CONVERSATION

If all communication is purposive, even the aimless talk that most of us engage in now and then must be goal-seeking, whether on the conscious or the unconscious level. Such conversation seems to aim only at the satisfaction of the human need for togetherness. When this is the goal, it makes little difference how it is accomplished. We make scattered efforts from different approaches. Is the introduction of gossip about a current happening a possible strategy? Is the evaluation of a current incident a possible strategy? Or must the initiator resort to the question—to that purely incitive device that calls for an answer, if only a nod? There is, of course, the unwilling recipient. This is a social problem that deserves attention. Field theory can contribute only this:

As an initiator, be a recipient to the barest sign, verbal or nonverbal, that comes back to you.

Use that sign to redirect your words toward the expansion of that sign. This is, of course, the exercise of feedback.

Do not be a linear speaker. The target is likely to move out of range and take pains to stay there.

But there is a kind of conversation which is consciously and sharply directed toward a predetermined goal. Such conversation may be dignified by other (and more important) names. The interview is purposive conversation; salesmanship is purposive conversation (and the "salesman" would do well to think of his work as a seller-buyer situa-

tion); consultation between physician and physician is conversation; cross examination (and the word "cross" is here significant) is conversation. Such purposive conversation is, probably, the most challenging of all communication experiences. No one can foretell where the talk will lead, and there is little time for deliberation. Field theory offers these suggestions:

If you have a goal, you have undoubtedly done some thinking about it. If you have a goal, your objective is to change the *status quo* in one way or another. *What don't you like in the status quo?* If you can answer this question, you will find, probably, that the answer will take the form of a causal pattern—*These things are causing this situation, and I don't like it.* If you have considered means, in preferred design, by which to change the *status quo,* you have made a verbal pattern that anticipates a possible actual pattern. This verbal pattern can be used consciously to direct and control the transaction. When you have a verbal pattern, it is possible to use feedforward to pave the way; feedback, to make corrective adjustments.

But sometimes you are confronted with a situation in which you have had no opportunity to analyze the situation nor to plan for the future. You must make your verbal pattern then and there. This is saying, in other words, that your thinking must be articulated and analyzed and appraised—on the spot.

Talking is thinking aloud. And thinking is the making of a concept—an instrument of order. The communicator creates order when he makes a verbal pattern.

The shift from linear to circular methods gives the communicator opportunity for silent reconsideration, for silent thinking. But this is possible only if the communica-

tor will pause long enough to invite participation. In conversation, the speaker is a listener; the listener is a speaker.

2. CONFERENCE

In a conference the transaction is more complicated. The talk is not back and forth; it moves in various directions.

A conference moves, usually, from information, to opinions concerning the applications, etc., of the information, to plans for action. To put this in the language of field theory, we move, usually, from a problematical situation which is expressible as a cause to effect relationship; to the making and the evaluation of possible means to end programs, thus to move in the direction of action that will lead to the desired goal.

Pattern stabilizes the whole procedure. Feedforward and feedback aim at eventual consensus concerning a plan of action. Participants move *from* designators, *to* appraisors, *to* prescriptors. The designators provide the area of agreement. The only requirements here are that the facts be accurately presented and that the facts be those which are pertinent to the problem. *We have x number of men under employment; we need y number to fill our contracts.* The movement from facts to opinions occurs when questions are entertained. *Where will we get the men? How shall we proceed? Shall we "import" them? Shall we move our plant to another location where labor is more plentiful? Shall we cut down on output?* Here, of course, there is opportunity for disagreement. Field theory has this to offer:

The communication process is circular. When an impasse occurs, get back to a point of agreement. This means, get back to relevant facts in connection with the problem. Or, assemble new information that relates to the proposed

plans. Let the process be circular; from facts to opinions to new facts, etc., until consensus is reached.

Field theory imposes this one requirement:

Every opinion is worth listening to—analytically, first; and only then, appraisively. This will tend to delay "emotional" reactions. As Rogers points out in his "Communication: Its Blocking and its Facilitation," the intelligent response is the honest attempt of one person to put himself in the position of another, of one person to attempt honestly to feel-think with another. This kind of listening tends to make the speaker less defensive, hence, less aggressive and more willing to appraise his own opinion objectively. For, as he speaks, he must, perforce, *listen to himself!* He does his thinking as he speaks. And this, Rogers points out, is the means by which we move toward understanding and the reconciliation of differing opinions.

Conference is a speaking-listening transaction; and analytical listening must precede appraisive reactions.

3. PUBLIC ADDRESS

The "speaker" who stands upon a platform and addresses an audience makes use of the same skills which he exercises under less formal circumstances. And the situation is still circular, and not linear.

In conversation and in conference no one in his right mind would try to accomplish a goal by the use of memorized words. But many speakers believe this is the safest way of preparing for a platform speech. Others think a list of items typed on a card for ready reference is a better way. Neither is efficient. The platform speaker requires stability and flexibility, and stability derives, of course, from the use of a verbal pattern. To understand the pattern is to know the pattern. There is no need to

memorize anything. And there is no need to use the crutch that has been called "notes" or "an outline."[41] The verbal pattern hangs together in such a way as to take the speaker progressively toward the end—and the final recapitulation of his working-title. The speaker has made this verbal pattern which represents his thinking. And, because he is concerned with transmitting his thinking as systematized by his verbal pattern, he will feedforward. He will tell his listeners what he intends to talk about. He will proceed, then, step by step, to deliver what he has promised. The preparation which the speaker has made at his desk is essential to his security upon a platform.[42]

But stability is not enough. The platform speaker who is unable to adapt to unexpected circumstances is in the greatest plight. I have heard questions from the floor when the speaker had not invited them; I have heard introductions that have demanded the consideration of certain questions; I have heard laughter when it could mean only derision. These, and others, are the things a speaker must cope with. The speaker's platform is not God's dais.

When a speaker is supported by a cohesive verbal pattern, he can entertain any signs, verbal or nonverbal, that come to him, very much as he would in conversation. For such a speaker addresses the group, however large, in person-to-person fashion. He begins his sentences never

[41] A speaker will do well to *read* a list of figures, a quotation, a bibliographical reference, etc., which must be exact.

[42] My students prepare in two steps; first, the making of the verbal pattern; second, the testing of the cohesiveness and progressiveness of the verbal pattern. To make this test, they stand up and speak, using the verbal pattern as the basis for the complete development. After they have done this two or three times—each time using different words, of course—they "trust" the verbal pattern. They know it *hangs together* in such a way as to take them safely to the end. This procedure serves, also, to "time" the speech, thus to keep it within the required limits.

knowing how he will end them, for he thinks as he speaks. He pauses normally in a transitional point—between the parts of the pattern—for he, himself, must "get ready" for what is to follow. His timing would, therefore, be a means of transmitting pattern. His timing would be that of spontaneous thought which would carry his listeners along in his thinking process. His words may, at times, come haltingly, but only because he thinks as he speaks. And this hesitation is the strongest bid for group response. There is no hint of monotony, for this is a performance that has all the ingredients of life.

In the face-to-face situation, the speaking-listening transaction is circular—and never linear—whether two or hundreds participate.

Effective speaking (speaking that *effects* the desired purpose) stems from the use of a verbal pattern by which to feedforward and to exercise corrective feedback.

Effective listening (listening that promotes understanding and proper evaluation) depends, first upon the discovery of the verbal pattern of the other, and only then upon the appraisal of the verbal pattern of another.

Every communication process is transacted by the use of a verbal pattern.

48. Field theory of communication—a method for BECOMING

The subject matter of this primer of semantics is concerned with the use of words in goal-seeking behavior. Since goal-seeking activity is addressed to the future, it is an adventure in becoming. I call goal-seeking an adventure because it demands the acceptance of risk-taking and the willingness

to stretch the self beyond what it is toward what it would become.

For me, goal-seeking behavior starts with a self-love that is a kind of self-appreciation—the will to enhance the self in every human way. The self is an imperfect unity. If the purpose of the human organism is, indeed, the drive toward "a more perfect organization," it is our unique human characteristic to be able to investigate and to appraise and to participate in that self-organization. *Field theory of communication provides the means.* And when the field becomes perceptible as part of the self, the line of demarcation between the self and other selves become "vague or non-existent." If this is so, it is fitting to close this book with a quotation from Kurt Lewin, that great researcher in field theory of psychology, who wrote as early as 1936 in his *Principles of Topological Psychology:* "From the point of view of dynamics the life space of each single individual is a totality which is equivalent to the totality of the whole physical world." (page 68) World-wide channels of communication are already available. It remains now only for man to speak for mankind.

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Where it seemed necessary, terms were referred to a specific
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BESS SONDEL's interest in communication has always been not merely with the transmission of ideas, but with the transmission of ideas as they affect human beings in daily life. The study of semantics is for her "a lifetime undertaking" and her vital concern with the intelligent use of language has been evident in all the stages of her academic career—first as a student at the University of Chicago, then as an instructor, and finally in her present position as Professorial Lecturer in Communication at the University of Chicago. Such an interest in communication is naturally not confined to the classroom and Dr. Sondel is also Consultant in Communication to the University's Industrial Relations Center. Among her books are *Are You Telling Them?, Everyday Speech, Speak Up! A New Approach to Communication,* and a pioneer work for use at University College of The University of Chicago entitled *Communication, A Field Theory.*

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